Concurrence: DDU D. D. Wodrich, Senior

Technical Advisor Office of River Protection, U.S. Department of Energy

R. T. French, Manager
Office of River Protection,
U.S. Department of Energy

4.2.1 River Protection Project

The River Protection Project (RPP), formerly known as the Tank Waste Remediation System (TWRS) Project, mission scope includes the activities needed to (1) resolve safety issues and provide an approved authorization basis for operations; (2) operate, maintain, and upgrade the tank farms and supporting infrastructure; (3) construct, operate, and maintain facilities that are necessary for waste storage, retrieval, treatment, immobilization, and storage or disposal; (4) characterize, retrieve, pretreat, and immobilize the waste for disposal; (5) provide for the disposition of the cesium and strontium capsule contents; (6) provide disposal of immobilized low-activity waste (ILAW) on-site; (7) provide interim storage of immobilized high-level waste (IHLW) until it is shipped to the national geologic repository; and (8) provide for the closure and decontamination and decommissioning (D&D) of RPP facilities and post-closure monitoring.

4.2.1.a Project Structure

Below is the current Project Structure for RPP. This structure will likely be changed due the following organizational announcement.

As directed by Congress in Section 3139 of the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999, the Department has established the Office of River Protection at the Hanford Site. The Office of River Protection is responsible for managing all aspects of the River Protection Project, including the "privatized" contract for treating and immobilizing the tank waste, and the non-privatized operations, maintenance, engineering, and construction activities in the tank farms. The Department has taken the following action to ensure the Office's success:

- The Office of River Protection has been organized to report directly to the Department's Assistant Secretary for Environmental Management, and the Office of River Protection Manager has been empowered to make key decisions in an expedited manner.
- The Department is staffing the Office of River Protection with highly skilled professionals. Project-critical expertise is being acquired, particularly in fixed-price contract management, private sector financial market analysis, project management, cost estimating, and safety analysis.
- A disciplined project management planning and control approach is being instituted to manage the tank waste cleanup as an integrated system.
- The Department is ensuring that the types of contracts used are tailored to the work being done, considering complexity, uncertainties, and risk.
- New and innovative ways to conduct the work and complete the mission are being sought through improved understanding and management of risks, and by exploring the merits of new ideas and alternatives.

The new office of river protection provides the Department a better way to communicate this critical goal to DOE employees, contractors, stakeholders, citizens, and Congress. The Department believes that the formation of this Office meets the intent of Congress and will be successful in treating Hanford's tank waste because:

- Urgency: The ORP comes at a critical time. The tanks are aging, many have leaked and the only permanent solution is to remove the waste form the tanks and dispose of it.

- Top-notch Management: A national search is being conducted to find the best available talent to fill the key ORP management positions.
- Accountability: The formation of ORP makes essentially one organization and one manager accountable for the success of the project.
- Better Organization : The ORP is organized as an integrated team with a clear chain of command.
- Attention: The name "Office of River Protection" emphasizes the critical importance of the project to the nation; and the Manager, Office of River Protection, reports directly to the Assistant Secretary for Environmental Management to help ensure top Department and Administration attention.
 - Tank Waste Characterization (RL-TW01)
 - Tank Safety Issue Resolution (RL-TW02)
 - Tank Farm Operations (RL-TW03)
 - Retrieval (RL-TW04)
 - Process Waste Support (RL-TW05)
 - Privatization Phase I (RL-TW06)
 - Privatization Phase II (RL-TW07)
 - · Privatization Infrastructure (RL-TW08)
 - Immobilized Tank Waste Storage & Disposal (RL-TW09)
 - RPP Management Support (RL-TW10)

4.2.1.b Hanford Strategic Plan Goals

The Waste, Material, and Geographic Area Goals contained in the Hanford Strategic Plan (DOE/RL-96-92), represent planning assumptions around which the Hanford Environmental Management effort is structured. Each Mission Area and Project partially support each of these goals, per scope of work described in the Prime Contracts. As an aggregate, all Mission Areas and Projects will fulfill the requirements of the Hanford Strategic Plan. As such, the Goals identified in this section cover only the goals directly supported by that specific Mission Area. Further details are contained in the Project planning documents. As records-of-decision are issued, these Goals will be amended in future revisions of the Hanford Strategic Plan.

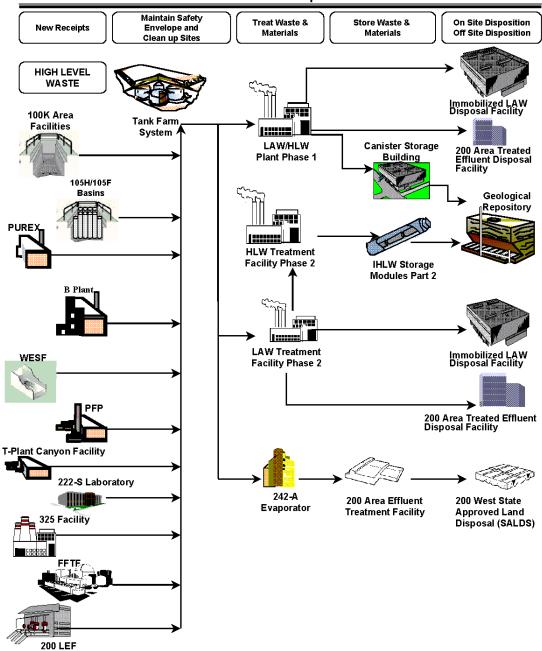
- The 200 Areas and central plateau will be used for the management of nuclear materials and the collection and disposal of waste materials that remain onsite and for other related and compatible uses. Cleanup levels and disposal standards will be established that are consistent with these long-term uses.
- Tank waste from both SSTs and DSTs will be retrieved for immobilization. Waste will be separated into high-level (HLW) and low-activity (LAW) fractions. LAW will be immobilized and disposed of onsite. HLW will be immobilized for disposal in an offsite federal repository.
- Safe, stable, secure onsite storage will be provided for all nuclear materials pending decisions on final disposition or until beneficial offsite uses are identified. Facilities without identified future uses will be transitioned to low-cost, stable deactivated conditions (requiring minimal surveillance and maintenance) pending eventual D&D and removal or closure.
- Surplus facilities will be decommissioned and decontaminated sufficiently to enable removal or closure through entombment.

4.2.1.c Technical Logic

Figure 4-2 presents the material flow/logic for the RPP.

Figure 4-2 River Protection Project Material/Flow Logic

RIVER PROTECTION PROJECT (TWRS) Waste and Material Disposition Paths



RPPS 10-22-99.ppt 990231 Systems Engineering/Sandy Bradford

4.2.1.d Facility Life-Cycle Responsibility Assignments

Table 4-1 River Protection Project Facility Life-Cycle Responsibility Assignments

			Lif	e Cycle Pha	ase		
Asset	Program	Pre-	Conceptual	Execute	O&M	Clos	e Out
	Planning	Conceptual				Post Ops	D&D
CP Soil Site Operable Units	RL-ER10					RL-ER02	RL-ER02
						RL-ER05	RL-ER07
209A					RL-TW03	RL-TW03	RL-TW04
213W					RL-TW03	RL-TW03	RL-TW04
216A271					DI TIMOS	RL-TW03	RL-TW04
220A 2402EA					RL-TW03	RL-TW03	RL-TW04
241A271					RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241A271 241A271A					RL-TW03	RL-TW03	RL-TW04
241A401					RL-TW03	RL-TW03	RL-TW04
241A431					RL-TW03	RL-TW03	RL-TW04
241A701					RL-TW03	RL-TW03	RL-TW04
241A702					RL-TW03	RL-TW03	RL-TW04
241AX501					RL-TW03	RL-TW03	RL-TW04
241AX801A					RL-TW03	RL-TW03	RL-TW04
241AX801B					RL-TW03	RL-TW03	RL-TW04
241AX801C					RL-TW03	RL-TW03	RL-TW04
241B701					RL-TW03	RL-TW03	RL-TW04
241BY254					RL-TW03	RL-TW03	RL-TW04
241BY301					RL-TW03	RL-TW03	RL-TW04
241BY302					RL-TW03	RL-TW03	RL-TW04
241BY302A					RL-TW03	RL-TW03	RL-TW04
241C51					RL-TW03	RL-TW03	RL-TW04
241C51A					RL-TW03	RL-TW03	RL-TW04
241C51B					RL-TW03	RL-TW03	RL-TW04
241C73					RL-TW03	RL-TW03	RL-TW04
241C90					RL-TW03	RL-TW03	RL-TW04 RL-TW04
241C91 241CR271					RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04
241S271 241S271					RL-TW03	RL-TW03	RL-TW04
241SX271					RL-TW03	RL-TW03	RL-TW04
241SX281					RL-TW03	RL-TW03	RL-TW04
241SX701					RL-TW03	RL-TW03	RL-TW04
241T601					RL-TW03	RL-TW03	RL-TW04
241T701					RL-TW03	RL-TW03	RL-TW04
241TX701					RL-TW03	RL-TW03	RL-TW04
241U271					RL-TW03	RL-TW03	RL-TW04
241U701					RL-TW03	RL-TW03	RL-TW04
241UR					RL-TW03	RL-TW03	RL-TW04
242S					RL-TW03	RL-TP10	RL-TW04
242S702					RL-TW03	RL-TW03	RL-TW04
242T					RL-TW03	RL-TP10	RL-TW04
242T601					RL-TW03	RL-TW03	RL-TW04
242TA					DI TIMO	RL-TW03	RL-TW04
242TB					RL-TW03	RL-TW03	RL-TW04
242TC		1			RL-TW03	RL-TW03	RL-TW04
244A 244AR					RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04
244AR 244AR701		+			RL-TW03	RL-TW03	RL-TW04 RL-TW04
244AR701 244AR715		1			RL-TW03	RL-TW03	RL-TW04
244BX		<u> </u>			RL-TW03	RL-TW03	RL-TW04
244CR					RL-TW03	RL-TW03	RL-TW04
244S					RL-TW03	RL-TW03	RL-TW04
244S271					RL-TW03	RL-TW03	RL-TW04
244TX		İ			RL-TW03	RL-TW03	RL-TW04
244TXR						RL-TW03	RL-TW04
244U					RL-TW03	RL-TW03	RL-TW04
244U1					RL-TW03	RL-TW03	RL-TW04
254BY					RL-TW03	RL-TW03	RL-TW04
2703E					RL-TW03	RL-TW03	RL-TW04

Table 4-1 River Protection Project Facility Life-Cycle Responsibility Assignments (Continued)

		•	Lit	e Cycle Pha	ıse		
Asset	Program	Pre-	Conceptual	Execute	O&M	Clos	e Out
	Planning	Conceptual	Concopiaai	ZXOGULO	••	Post Ops	D&D
2707AR					RL-TW03	RL-TW03	RL-TW04
2707AX					RL-TW03	RL-TW03	RL-TW04
2707SX					RL-TW03	RL-TW03	RL-TW04
2708AR					RL-TW03	RL-TW03	RL-TW04
2712B 2713W					RL-TW03 RL-TW03	RL-TW03 RL-TP10	RL-TW04 RL-TW04
2713WB					RL-TW03	RL-TW03	RL-TW04
2713WC					RL-TW03	RL-TW03	RL-TW04
2714AR					RL-TW03	RL-TW03	RL-TW04
271CR					RL-TW03	RL-TW03	RL-TW04
2724A 2724B					RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
2724BX					RL-TW03	RL-TW03	RL-TW04
2724BY					RL-TW03	RL-TW03	RL-TW04
2724C					RL-TW03	RL-TW03	RL-TW04
2724SX					RL-TW03	RL-TW03	RL-TW04
2724T	+				RL-TW03	RL-TW03	RL-TW04
2724TX 2724TXA		1			RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
2724TXB					RL-TW03	RL-TW03	RL-TW04
2724U					RL-TW03	RL-TW03	RL-TW04
2724UA					RL-TW03	RL-TW03	RL-TW04
2727WA					RL-TW03	RL-TW03	RL-TW04
272A					RL-TW03	RL-TW03	RL-TW04
272HV 272WA					RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
2902HV					RL-TW03	RL-TW03	RL-TW04
2905R					RL-TW03	RL-TW03	RL-TW04
291AR					RL-TW03	RL-TW03	RL-TW04
292AR					RL-TW03	RL-TW03	RL-TW04
241C801			DI TWOC	DI TWO	DI TWO	RL-TW03	RL-TW04
LAW/HLW Plant, Phase 1			RL-TW06 RL-WM07	RL-TW06 RL-WM07	RL-TW06	RL-TW06	RL-TW06
LAW Treatment Facility, Phase 2			RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07
27117 1100111101111 40111119, 1 11000 2			RL-WM07	RL-WM07		1	
HLW Treatment Facility, Phase 2			RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07
			RL-WM07	RL-WM07			
Tank Farm System					RL-TW01	RL-TW03	RL-TW04
					RL-TW02		
					RL-TW03 RL-TW04		
204AR					RL-TW04	RL-TW03	RL-TW04
2400E					RL-TW03	RL-TW03	RL-TW04
2403E					RL-TW03	RL-TW03	RL-TW04
2403EA				_	RL-TW03	RL-TW03	RL-TW04
2404E	1				RL-TW03	RL-TW03	RL-TW04
241AN271 241AN273	+				RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241AN801	+				RL-TW03	RL-TW03	RL-TW04
241AN274					RL-TW03	RL-TW03	RL-TW04
241AP271					RL-TW03	RL-TW03	RL-TW04
241AP273					RL-TW03	RL-TW03	RL-TW04
241AP801	1	-			RL-TW03	RL-TW03	RL-TW04
241AW271 241AW801					RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241AW273					RL-TW03	RL-TW03	RL-TW04
241AY401					RL-TW03	RL-TW03	RL-TW04
241AY402				_	RL-TW03	RL-TW03	RL-TW04
241AY51	1	ļ			RL-TW03	RL-TW03	RL-TW04
241AY51A	1	1			RL-TW03	RL-TW03	RL-TW04
241AY51B 241AY801A					RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241AY801 241AY801					RL-TW03	RL-TW03	RL-TW04
241AZ156					RL-TW03	RL-TW03	RL-TW04
241AZ271					RL-TW03	RL-TW03	RL-TW04
241AZ274				_	RL-TW03	RL-TW03	RL-TW04

Table 4-1 River Protection Project Facility Life-Cycle Responsibility Assignments (Continued)

			Li	fe Cycle Pha	ase		
Asset	Program	Pre-	Conceptual	Execute	O&M	Clos	e Out
	Planning	Conceptual				Post Ops	D&D
241AZ401					RL-TW03	RL-TW03	RL-TW04
241AZ402					RL-TW03	RL-TW03	RL-TW04
241AZ701					RL-TW03	RL-TW03	RL-TW04
241AZ702					RL-TW03	RL-TW03	RL-TW04
241AZ801					RL-TW03	RL-TW03	RL-TW04
241AZ801A					RL-TW03	RL-TW03	RL-TW04
241SY271					RL-TW03	RL-TW03	RL-TW04
241SY272					RL-TW03	RL-TW03	RL-TW04
241SY275					RL-TW03	RL-TW03	RL-TW04
241SY274					RL-TW03	RL-TW03	RL-TW04
241SY273					RL-TW03	RL-TW03	RL-TW04
241SY276		1		ĺ	RL-TW03	RL-TW03	RL-TW04
241SY701					RL-TW03	RL-TW03	RL-TW04
243G					RL-TW03	RL-TW03	RL-TW04
243G12					RL-TW03	RL-TW03	RL-TW04
243G2					RL-TW03	RL-TW03	RL-TW04
243G3					RL-TW03	RL-TW03	RL-TW04
243G5					RL-TW03	RL-TW03	RL-TW04
243G8					RL-TW03	RL-TW03	RL-TW04
243G6					RL-TW03	RL-TW03	RL-TW04
243G81					RL-TW03	RL-TW03	RL-TW04
243G82					RL-TW03	RL-TW03	RL-TW04
243G9					RL-TW03	RL-TW03	RL-TW04
2701HV					RL-TW03	RL-TW03	RL-TW04
2704HV					RL-TW03	RL-TW03	RL-TW04
2715AW					RL-TW03	RL-TW03	RL-TW04
2724AZ					RL-TW03	RL-TW03	RL-TW04
2724SY					RL-TW03	RL-TW03	RL-TW04
2724AY					RL-TW03	RL-TW03	RL-TW04
272AW					RL-TW03	RL-TW03	RL-TW04
272AW10		1			RL-TW03	RL-TW03	RL-TW04
296A043	1	1			RL-TW03	RL-TW03	RL-TW04
296A042					RL-TW03	RL-TW03	RL-TW04
273EA	1	1			RL-TW03	RL-TW03	RL-TW04
TC272HV					RL-TW03	RL-TW03	RL-TW04
Canister Storage Building	RL-TW09	1		RL-TW09	RL-TW09	RL-TW09	RL-WM02
Cameto. Otorage Danamy	RL-WM01			RL-WM01	RL-WM01	RL-WM02	
	VE VVIVIO I			I VE-VVIVIO I	RL-WM02	I LE VVIVIOZ	1
IHLW Storage Modules, Part 2	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-WW02	RL-TW09	RL-TW09
in Live Storage Modules, Falt 2	111111111111111111111111111111111111111	175-14409	RL-TW09 RL-WM07	l .	1,5-1,009	1,5-1,4409	11,5-1,4409
Immobilized LAW Dispessi Essilis	RL-TW09	RL-TW09	RL-WW07	RL-WM07	RL-TW09	RL-TW09	DI TWO
Immobilized LAW Disposal Facility	KL-1 VV U9	KL-1 WU9		RL-TW09	Kr-1009	KL-1 WU9	RL-TW09
In an ability of LAW/Discussive Section	DI TIMO	DI TWO	RL-WM07	RL-WM07	DI TIMOS	DI TWO	DI TWO
Immobilized LAW Disposal Facilityy,	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09
Additional Vaults		1			1		1

* RL PBS Identifier Index:

RL-ER02 - 200 Area Source Remedial Action

RL-ER05 - Surveillance & Maintenance

RL-ER07 - Long Term Surveillance & Maintenance RL-ER10 - ER Program Management and Support

RL-TP10 - Accelerated Deactivation

RL-TW01 - Tank Waste Characterization

RL-TW02 - Tank Safety Issue Resolution

RL-TW03 - Tank Farm Operations

RL-TW04 - Retrieval

RL-TW06 - Privatization Phase I

RL-TW07 - Privatization Phase II

RL-TW09 - Immobilized Tank Waste Storage & Disposal

RL-WM01 - Spent Nuclear Fuel Project

RL-WM02 - Canister Storage Building Operations

RL-WM07 - Waste Minimization

TABLE 4-2 River Protection Project Facility Life-Cycle Responsibility Assignments for Waste Sites

waste one.	-		ifa Cuala Dha	
Wasta Sita	Status		ife Cycle Pha	
Waste Site CP Soil Site Operable Units	Status Active	O&M	Post Ops RL-ER02	D&D RL-ER02
or con one operation of the	7.070		RL-ER05	RL-ER07
200-E-29, Unplanned Release From 241-ER-152 Diversion Box	Active		RL-TW03	RL-ER02
241-B-101, 241-B-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-B-102, 241-B-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-B-103, 241-B-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-B-104, 241-B-TK-104 241-B-105, 241-B-TK-105	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241-B-105, 241-B-1K-105	Active	RL-TW03	RL-TW03	RL-TW04
241-B-107, 241-B-TK-107	Active	RL-TW03	RL-TW03	RL-TW04
241-B-108, 241-B-TK-108	Active	RL-TW03	RL-TW03	RL-TW04
241-B-109, 241-B-TK-109	Active	RL-TW03	RL-TW03	RL-TW04
241-B-110, 241-B-TK-110	Active	RL-TW03	RL-TW03	RL-TW04
241-B-111, 241-B-TK-111	Active	RL-TW03	RL-TW03	RL-TW04
241-B-112, 241-B-TK-112 241-B-151, 241-B-151 Diversion Box	Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04
241-B-151, 241-B-151 Diversion Box	Active Active	RL-TW03	RL-TW03	RL-TW04 RL-TW04
241-B-153, 241-B-153 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-B-201, 241-B-TK-201	Active	RL-TW03	RL-TW03	RL-TW03
241-B-202, 241-B-TK-202	Active	RL-TW03	RL-TW03	RL-TW04
241-B-203, 241-B-TK-203	Active	RL-TW03	RL-TW03	RL-TW04
241-B-204, 241-B-TK-204	Active	RL-TW03	RL-TW03	RL-TW04
241-B-252, 241-B-252 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-B-301, 241-B-301-B Catch Tank, 241-B-301B 241-BR-152, 241-BR-152 Diversion Box	Active Active	RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241-BX-101, 241-BX-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-102, 241-BX-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-103, 241-BX-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-104, 241-BX-TK-104	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-105, 241-BX-TK-105	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-106, 241-BX-TK-106	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-107, 241-BX-TK-107 241-BX-108, 241-BX-TK-108	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241-BX-100, 241-BX-TK-100 241-BX-109, 241-BX-TK-109	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-110, 241-BX-TK-110	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-111, 241-BX-TK-111	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-112, 241-BX-TK-112	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-153, 241-BX-153 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-BX-302A, 241-BX-302-A Catch Tank	Active	DI TIMO	RL-TW03	RL-TW03
241-BXR-151, 241-BXR-151 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-BXR-152, 241-BXR-152 Diversion Box 241-BXR-153, 241-BXR-153 Diversion Box	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241-BY-101, 241-BY-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-BY-102, 241-BY-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-BY-103, 241-BY-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-BY-104, 241-BY-TK-104	Active	RL-TW03	RL-TW03	RL-TW04
241-BY-105, 241-BY-TK-105	Active	RL-TW03	RL-TW03	RL-TW04
241-BY-106, 241-BY-1K-106	Active	RL-TW03	RL-TW03	RL-TW04
241-BY-107, 241-BY-TK-107 241-BY-108, 241-BY-TK-108	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241-BY-106, 241-BY-TK-108 241-BY-109, 241-BY-TK-109	Active	RL-TW03	RL-TW03	RL-TW04
241-BY-110, 241-BY-TK-109	Active	RL-TW03	RL-TW03	RL-TW04
241-BY-111, 241-BY-TK-111	Active	RL-TW03	RL-TW03	RL-TW04
241-BY-112, 241-BY-TK-112	Active	RL-TW03	RL-TW03	RL-TW04
241-BYR-152, 241-BYR-152 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-BYR-153, 241-BYR-153 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-BYR-154, 241-BYR-154 Diversion Box 242-B-151	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
244-BX DCRT, 244-BX Double-Contained Receiver Tank, 244-BX RT,	Active	RL-TW03	RL-TW03	RL-TW04
244-BX Receiver Tank, 244-BX-TK/SMP, 244-BX Receiver Vault,	, 101140			
244-BXR VAULT, 244-BXR Vault, 244-BXR Receiving Vault. (Subsites	Active	1	RL-TW03	RL-TW03
244-BXR-001, 244-BXR-002, 244-BXR-003, 244-BXR-011.)				
2607-EB	Active	RL-TW03	RL-TW03	RL-TW03
UPR-200-E-105, UN-200-E-105	Active		RL-TW03	RL-TW03
UPR-200-E-108, UN-200-E-108	Active	_	RL-TW03	RL-TW03
UPR-200-E-109, UN-200-E-109	Active	1	RL-TW03	RL-TW03
UPR-200-E-110, 241-BY Valve Pit Release, UN-200-E-110 UPR-200-E-116, UN-200-E-116	Active Active	+	RL-TW03 RL-TW03	RL-TW03 RL-TW03
OF N-200-E-110, ON-200-E-110	IVOUAG	1	117F-1 AAOS	117F-1 AAOS

TABLE 4-2 River Protection Project Facility Life-Cycle Responsibility Assignments for Waste Sites (Continued)

,	, ,		ife Cycle Pha	250
Waste Site	Status	O&M	Post Ops	
UPR-200-E-127. UN-200-E-127	Active	Odivi	RL-TW03	RL-TW03
UPR-200-E-128, UN-200-E-128	Active		RL-TW03	RL-TW03
UPR-200-E-129, UN-200-E-129	Active		RL-TW03	RL-TW03
UPR-200-E-130, UN-200-E-130	Active		RL-TW03	RL-TW03
UPR-200-E-131, UN-200-E-131	Active		RL-TW03	RL-TW03
UPR-200-E-132, UN-200-E-132	Active		RL-TW03	RL-TW03
UPR-200-E-133, UN-200-E-133	Active		RL-TW03	RL-TW03
UPR-200-E-134, UN-200-E-134	Active		RL-TW03	RL-TW03
UPR-200-E-135, UN-200-E-135	Active		RL-TW03	RL-TW03
UPR-200-E-38, Release from 241-B-152, UN-200-E-38, UN-216-E-38	Active		RL-TW03	RL-TW03
UPR-200-E-5, UN-200-E-5	Active		RL-TW03	RL-TW03
UPR-200-E-6, UN-200-E-6, Contamination Around the 241-B-153 Diversion	Active		RL-TW03	RL-TW03
Box			<u> </u>	
UPR-200-E-73, UN-216-E-1, 241-B-151 Diversion Box Contamination, UN-200-E-73	Active		RL-TW03	RL-TW03
UPR-200-E-74, UN-216-E-2, 241-B-152 Diversion Box Contamination, UN-200-E-74	Active		RL-TW03	RL-TW03
UPR-200-E-75, UN-216-E-3, 241-B-153 Diversion Box Contamination,	Active		RL-TW03	RL-TW03
UN-200-E-75	A ations	1	DI TIMOS	DI TWO
UPR-200-E-76, UN-216-E-4, 241-B-153 Line Break, UN-200-E-76	Active	}	RL-TW03 RL-TW03	RL-TW03
UPR-200-E-79, UN-216-E-7, 242-B to 207-B Line Break, UN-200-E-79 216-B-63, B Plant Chemical Sewer, 216-B-63 Trench	Active Active	1	RL-TW03	RL-TW03 RL-ER02
216-W-LWC, 216-W-LC, Laundry Waste Crib, 216-W-LWC Crib, 216-W-1	Active		RL-TW03	RL-ER02
216-A-40 Retention Basin, 216-A-39 Crib, 216-A-39 Trench	Active	 	RL-TW03	RL-ER02 RL-ER02
216-C-9, 216-C-7 Swamp, Former 221-C Canyon Excavation, 216-C-9	Active		RL-TW03	RL-ER02
Swamp, Semi-Works Swamp, 216-C-9 C Canyon Excavation Semiworks	Active		IKE-TW05	IXL-LIXUZ
Swamp				
UPR-200-E-14, UN-200-E-14, 216-B-3 Pond Dike Break	Active		RL-TW03	RL-ER02
207-T. T Plant Retention Basin, 207-T. 207-T Retention Basin	Active	RL-TW03	RL-TW03	RL-ER02
216-T-1, 221-T Ditch, 221-T Trench, 216-T-1 Trench	Active	IXE TWOO	RL-TW03	RL-ER02
216-T-12, 207-T Sludge Grave, 207-T Sludge Pit, 216-T-11	Active		RL-TW03	RL-ER02
216-T-4-2, 216-T-4-2 Ditch	Active		RL-TW03	RL-ER02
216-Z-20, Z-19 Ditch Replacement Tile Field	Active		RL-TW03	RL-ER02
200-W-7, 246-L, 243S-TK-1, 243-S-TK1	Active	RL-TW03	RL-TW03	RL-ER02
216-TY-201, Supernatant Disposal Flush Tank	Active		RL-TW03	RL-ER02
240-S-151, 240-S-151 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
240-S-152, 240-S-152 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
240-S-302, 240-S-302 Catch Tank	Active	D. =1400	RL-TW03	RL-ER02
241-A-151, 241-A-151 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
241-A-302A, 241-A-302-A Catch Tank	Active	RL-TW03	RL-TW03	RL-ER02
241-A-302B, 241-A-302-B Catch Tank 241-B-154, 241-B-154 Diversion Box	Active	RL-TW03	RL-TW03 RL-TW03	RL-ER02
241-B-302B, 241-B-302-B Catch Tank, 241-B-302	Active Active	RL-1003	RL-TW03	RL-ER02 RL-ER02
241-B-302B, 241-B-302-B Calcit Talik, 241-B-302	Active	RL-TW03	RL-TW03	RL-ER02
241-BX-154, 241-BX-154 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
241-BX-302B, 241-BX-302-B Catch Tank	Active	IXE TWOO	RL-TW03	RL-ER02
241-BX-302C, 241-BX-302-C Catch Tank	Active		RL-TW03	RL-ER02
241-C-154, 241-C-154 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
241-CX-70, 241-CX-TK-70 Tank, Strontium Hot Semi-works	Active		RL-TW03	RL-TW04
241-CX-71, 241-CX-TK-71, 241-CX Neutralization Tank, Strontium Hot	Active		RL-TW03	RL-TW04
Semi-works 241-CX-72, 241-CX-TK-72 Vault and Tank, 241-CX-72 Waste Self	Active		RL-TW03	RL-TW04
Concentrator, Strontium Hot Semi-works				
241-ER-151, 241-ER-151 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
241-ER-152, 241-ER-152 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
241-ER-311, 241-ER-311 Catch Tank	Active	RL-TW03	RL-TW03	RL-ER02
241-ER-311A, 241-ER-311A Catch Tank, old 241-ER-311	Active	1	RL-TW03	RL-ER02
241-SX-302, 241-SX-302 Catch Tank, SX-304	Active	DI TMO	RL-TW03	RL-ER02
241-TX-152, 241-TX-152 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
241-TX-154, 241-TX-154 Diversion Box 241-TX-155, 241-TX-155 Diversion Box	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-ER02 RL-ER02
241-TX-105, 241-TX-105 Diversion Box 241-TX-302B, 241-TX-302-B Catch Tank	Active	RL-TW03	RL-TW03	RL-ER02
241-TX-302BR, 241-TX-302BR Catch Tank, 241-TXR-302BR	Active	17F-14402	RL-TW03	RL-ER02
241-TX-302BK, 241-TX-302BK Calcin fails, 241-TXK-302BK	Active	RL-TW03	RL-TW03	RL-ER02
241-U-151, 241-U-151 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
241-U-152, 241-U-152 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
241-UX-154, 241-UX-154 Diversion Box	Active	RL-TW03	RL-TW03	RL-ER02
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TABLE 4-2 River Protection Project Facility Life-Cycle Responsibility Assignments for Waste Sites (Continued)

Waste Sites (Contin	1	.		
			ife Cycle Pha	
Waste Site	Status	O&M	Post Ops	D&D
241-UX-302A, 241-U-302 Catch Tank, 241-UX-302 Catch Tank, 241-UX-302	Active	RL-TW03	RL-TW03	RL-ER02
UPR-200-E-117, Contaminated Liquid Spill, UN-200-E-117	Active	RL-TP01	RL-TW03	RL-ER02
UPR-200-E-177, Contaminated Englid Spill, 014-200-E-177 UPR-200-E-25, Contamination Spread from the 241-A-151 Diversion Box,	Active	11101	RL-TW03	RL-ER02
UN-200-E-25	7.0		1	TKE ETKOE
UPR-200-E-26, 241-A-151 Release, UN-200-E-26	Active		RL-TW03	RL-ER02
UPR-200-E-31, 241-A-151 Release, UN-200-E-31	Active		RL-TW03	RL-ER02
UPR-200-E-42, 241-AX-151 Release, UN-200-E-42	Active		RL-TW03	RL-ER02
UPR-200-E-77, UN-216-E-5, 241-B-154 Diversion Box Ground	Active		RL-TW03	RL-ER02
Contamination, UN-200-E-77 UPR-200-E-78, UN-216-E-6, 241-BX-155 Diversion Box ground	A ations	+	DI TMO	DI EDOS
contamination, UN-200-E-78	Active		RL-TW03	RL-ER02
UPR-200-E-84,241-ER-151 Catch Tank Leak, UN-200-E-84, UN-216-E-12	Active		RL-TW03	RL-ER02
UPR-200-W-131, Release from 241-TX-155	Active		RL-TW03	RL-ER02
UPR-200-W-135, Release from 241-TX-155, UN-200-2-135	Active		RL-TW03	RL-ER02
UPR-200-W-161, UN-216-W-35, UN-200-W-161	Active		RL-TW03	RL-ER02
UPR-200-W-167, Contamiantion Migration from 241-TY, UN-216-W-32	Active		RL-TW03	RL-ER02
UPR-200-W-21, UN-200-W-21, Ground Contamination at 241-TX-154	Active		RL-TW03	RL-ER02
Diversion Box	A otivis	+	DI TWO	DI EDGG
UPR-200-W-28, Release from 241-TX-155, UN-200-W-28	Active	+	RL-TW03 RL-TW03	RL-ER02 RL-ER02
UPR-200-W-38, Line Break at 241-TX-302, UPR-200-W-160, UPR-200-W-40, UN-200-W-38, 216-T-30, UN-216-W-36,	Active	1	IXE-1 WU3	INL-ERUZ
UPR-200-W-49, Contamination Southeast of 241-SX, UN-200-W-49	Active	+	RL-TW03	RL-ER02
UPR-200-W-5, Overflow at 241-TX-155, UN-200-W-5	Active	1	RL-TW03	RL-ER02
UPR-200-W-6, UN-200-W-6, Contamination Spread from 241-U-151 and	Active		RL-TW03	RL-ER02
152 Diversion Boxes				
UPR-600-20, UN-216-E-41, Cross Country Transfer Line	Active		RL-TW03	RL-ER02
216-S-26, 216-S-19 Replacement Facility, 216-S-26 Crib	Active		RL-TW03	RL-ER02
200-E-4, Critical Mass Laboratory Dry Well North, 209-E North Dry Well,	Active	RL-TW03	RL-TW03	RL-ER02
Miscellaneous Stream #730	A ations	DI TMO	DI TMO	DI EDOO
209-E-WS-1, 209-E French Drain 209-E-WS-2, Critical Mass Lab French Drain	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-ER02 RL-ER02
216-SX-2 Crib	Active	KL-17003	RL-TW03	RL-ER02
216-T-31	Active		RL-TW03	RL-ER02
216-Z-21, 216-Z-21 Seepage Basin, PFP Cold Waste Pond	Active		RL-TW03	RL-ER02
UPR-200-E-15, Overflow at 216-A-4, UN-200-E-15, UPR-200-E-13	Active		RL-TW03	RL-ER02
UPR-200-E-17, Overflow at 216-A-22, UN-200-E-17	Active		RL-TW03	RL-ER02
200-E-43, Tank Car Storage Area, Regulated Equipment Storage Area,	Active	RL-TW03	RL-TW03	RL-ER02
TC-4 Spur Tank Car Storage Area	A .:	DI TIMO	DI TIMO	DI TIMOS
200-E-27, 242AC Pipefitter Shop Lead Cutting Area 204-AR, 204-AR Waste Unloading Station	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW03 RL-TW04
216-A-39, 216-A-39 Crib, 216-A-39 Trench	Active	KL-17003	RL-TW03	RL-ER02
241-A-101, 241-A-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-A-102, 241-A-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-A-103, 241-A-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-A-104, 241-A-TK-104	Active	RL-TW03	RL-TW03	RL-TW04
241-A-105, 241-A-TK-105	Active	RL-TW03	RL-TW03	RL-TW04
241-A-106, 241-A-TK-106	Active	RL-TW03	RL-TW03	RL-TW04
241-A-152, 241-A-152 Diversion Box 216-BY-201, Flush Tank 241-BY, 216-BY-47, Supernatant Disposal Flush	Active Active	RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-ER02
Tank	Active		KL-17003	KL-EKUZ
241-A-153, 241-A-153 Diversion Box, 241-A-153 Transfer Station	Active	RL-TW03	RL-TW03	RL-TW04
241-A-133, 241-A-133 Diversion Box, 241-A-133 Transfer Station	Active	RL-TW03	RL-TW03	RL-TW04
241-A-417, 241-A-417 Condensate Tank	Active	RL-TW03	RL-TW03	RL-TW04
241-AX-101, 241-AX-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-AX-102, 241-AX-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-AX-103, 241-AX-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-AX-104, 241-AX-TK-104	Active	RL-TW03	RL-TW03	RL-TW04
241-AX-152DS, 241-AX-152 Diverter Station, 241-AX-152-DS Diverter Station	Active	RL-TW03	RL-TW03	RL-TW04
241-AX-155, 241-AX-155 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-AX-501, 241-AX-501 Valve Pit, 241-AX-501 Condensate Valve Pit	Active	RL-TW03	RL-TW03	RL-TW04
241-AX-A, 241-AX-A Diversion Box, 241-AX-A Structural Valve Pit,	Active	RL-TW03	RL-TW03	RL-TW04
241-AX-A Valve Pit	1		1.200	
241-AX-B, 241-AX-B Diversion Box, 241-AX-B Structural Valve Pit,	Active	RL-TW03	RL-TW03	RL-TW04
241-AX-B Valve Pit				
241-C-101, 241-C-TK-101	Active	RL-TW03	RL-TW03	RL-TW04

TABLE 4-2 River Protection Project Facility Life-Cycle Responsibility Assignments for Waste Sites (Continued)

Waste Site			L	ife Cycle Ph	ase
Active RL-TW03 RL-TW04 Active RL-TW03 RL-TW04 Active RL-TW03 RL-TW04 Active RL-TW03 RL-TW04 RL-TW04 RL-TW03 RL-TW04 Active RL-TW03 RL-TW04 RL-TW04 RL-TW03 RL-TW04 RL-TW04 RL-TW04 RL-TW04 RL-TW03 RL-TW04 RL-TW04 RL-TW04 RL-TW05 RL-TW04 RL-TW05 RL-TW04 RL-TW05 RL-TW05 RL-TW04 RL-TW05 RL-TW05 RL-TW05 RL-TW05 RL-TW06 RL-TW05 RL-TW06 RL-TW05 RL-TW06 RL-TW05 RL-TW06 RL-TW0	Waste Site	Status			
241-C-104, 241-C-TK-105 Active RL-TW03 RL-TW04 Active RL-TW03 RL-TW04 Active RL-TW03 RL-TW04 Active RL-TW03 RL-TW04 RL-TW03 RL-TW04 Active RL-TW03 RL-TW04 RL-TW04 RL-TW03 RL-TW04 RL-					RL-TW04
241-C-105, 241-C-TK-106					RL-TW04
Active Active RL-TW03 RL-TW0 RL-TW04 RL-TW05 RL-TW05 RL-TW05 RL-TW05 RL-TW06 RL-TW06					
241-C-107, 241-C-TK-108		_		RI -TW03	RL-TW04
241-C-108, 241-C-TK-109	241-C-107, 241-C-TK-107				RL-TW04
241-C-110, 241-C-TK-110	241-C-108, 241-C-TK-108		RL-TW03	RL-TW03	RL-TW04
241-C-111, 241-C-TK-111					RL-TW04
241-C-112, 241-C-151 Diversion Box				RL-TW03	
241-C-151, 241-C-151 Diversion Box				RL-TW03	RL-TW04
241-C-153, 241-C-153 Diversion Box			RL-TW03		RL-TW04
Active RL-TW03 RL-TW			RL-TW03		RL-TW04
Active RL-TW03 RL-TW03 RL-TW03 RL-TW03 RL-TW03 RL-TW04 RL-TW04 RL-TW04 RL-TW05 RL-TW05 RL-TW05 RL-TW05 RL-TW05 RL-TW06 RL-TW06 RL-TW06 RL-TW06 RL-TW06 RL-TW06 RL-TW08 RL-TW					RL-TW04
241-C-203, 241-C-TK-204			RL-TW03		
241-C-204, 241-C-TK-204					RL-TW04
241-C-301. 241-C-301-C Catch Tank, 241-C-301C					RL-TW04
Z41-CR-151, Z41-CR-152 Diversion Box	241-C-252, 241-C-252 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-CR-152, 241-CR-152 Diversion Box			DI TWO		RL-TW04
Active RL-TW03 RL-TW03 RL-TW04 RL-TW03 RL-TW05 RL-TW05 RL-TW05 RL-TW06 RL-TW06 RL-TW06 RL-TW07 RL-TW07 RL-TW08 RL-TW		_			
Active					RL-TW04
Active			RL-TW03		RL-TW04
Active	241-S-102, 241-S-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-S-105, 241-S-TK-105 Active RL-TW03 RL-TW03 RL-TW0241-S-106, 241-S-TK-106 Active RL-TW03			RL-TW03	RL-TW04	
241-S-106, 241-S-TK-106				RL-TW03	
Active RL-TW03 RL-TW			RL-TW03		
Active					RL-TW04
241-S-110, 241-S-TK-110 Active RL-TW03 RL-TW03 RL-TW03 241-S-111, 241-S-TK-111 Active RL-TW03 RL-TW03 RL-TW03 241-S-112, 241-S-151 Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-152, 241-S-152 Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-302A, 241-S-302-A Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-302B, 241-S-302-B Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-304, 241-S-304 Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-30, 241-S-A Valve Pit, 241-S-A Diversion Box Active RL-TW03 RL-TW03 241-S-B, 241-S-B Diversion Box Active RL-TW03 RL-TW03 241-S-C, 241-S-C Valve Pit, 241-S-B Diversion Box Active RL-TW03 RL-TW03 241-S-D, 241-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 241-S-N-104, 241-S-TK-101 Active RL-TW03 RL-TW03 241-SX-102, 241-SX-TK-102 Active RL-TW03 RL-TW03<		Active	RL-TW03	RL-TW03	RL-TW04
241-S-111, 241-S-TK-111 Active RL-TW03 RL-TW03 RL-TW03 241-S-151, 241-S-TK-112 Active RL-TW03 RL-TW03 RL-TW03 241-S-151, 241-S-151 Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-152, 241-S-152 Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-302A, 241-S-302-A Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-302B, 241-S-302-B Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-304, 241-S-304 Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-A, 241-S-A Valve Pit, 241-S-A Diversion Box Active RL-TW03 RL-TW03 241-S-B, 241-S-B Valve Pit, 241-S-B Diversion Box Active RL-TW03 RL-TW03 241-S-C, 241-S-C Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 241-S-Y-101, 241-SY-TK-101 Active RL-TW03 RL-TW03 RL-TW03 241-SY-102, 241-SY-TK-103 Active RL-TW03 RL-TW03 RL-TW03 241-SY-103, 241-SY-TK-106 Active					RL-TW04
241-S-112, 241-S-TK-112 Active RL-TW03 RL-TW03 RL-TW03 241-S-151, 241-S-151 Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-152, 241-S-152 Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-302A, 241-S-302-A Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-302B, 241-S-304 Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-304, 241-S-A Valve Pit, 241-S-A Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-B, 241-S-B Valve Pit, 241-S-B Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-C, 241-S-C Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-1-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-1-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-1-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-1-S-D Valve Pit, 241-S-D Diversion Box Active RL-					
241-S-151, 241-S-151 Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-152, 241-S-152 Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-302A, 241-S-302-A Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-304, 241-S-304 Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-A, 241-S-A Valve Pit, 241-S-A Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-B, 241-S-B Valve Pit, 241-S-B Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-C, 241-S-C Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-D, 241-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-SX-101, 241-SX-TK-101 Active RL-TW03 RL-TW03 RL-TW03 241-SX-102, 241-SX-TK-103 Active RL-TW03 RL-TW03 241-SX-104, 241-SX-TK-105 Active RL-TW03 RL-TW03 241-SX-106, 241-SX-TK-106 Active RL-TW03 RL-TW03 241-SX-107, 241-SX-TK-106					
241-S-302A, 241-S-302-A Catch Tank Active RL-TW03 RL-TW03 241-S-302B, 241-S-302-B Catch Tank Active RL-TW03 RL-TW03 241-S-304, 241-S-304 Catch Tank Active RL-TW03 RL-TW03 RL-TW03 241-S-A, 241-S-A Valve Pit, 241-S-A Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-B, 241-S-B Valve Pit, 241-S-B Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-C, 241-S-C Valve Pit, 241-S-C Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-D, 241-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-SX-101, 241-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-SX-102, 241-SX-TK-101 Active RL-TW03 RL-TW03 RL-TW03 241-SX-102, 241-SX-TK-102 Active RL-TW03 RL-TW03 241-SX-103, 241-SX-TK-103 Active RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-106 Active RL-TW03 RL-TW03 241-SX-106, 241-SX-TK-106 Active RL					RL-TW04
241-S-302B, 241-S-302-B Catch Tank Active RL-TW03 RL-TW03 <td></td> <td></td> <td></td> <td></td> <td>RL-TW04</td>					RL-TW04
241-S-304, 241-S-304 Catch Tank Active RL-TW03 RL-TW03 RL-ERC 241-S-A, 241-S-A Valve Pit, 241-S-A Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-B, 241-S-B Valve Pit, 241-S-B Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-C, 241-S-C Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-D, 241-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-SY-101, 241-SY-TK-101 Active RL-TW03 RL-TW03 RL-TW03 241-SX-102, 241-SX-TK-102 Active RL-TW03 RL-TW03 241-SX-103, 241-SX-TK-103 Active RL-TW03 RL-TW03 241-SX-104, 241-SX-TK-106 Active RL-TW03 RL-TW03 241-SX-107, 241-SX-TK-106 Active RL-TW03 RL-TW03 241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-108 Active RL-TW03 RL-TW03					RL-TW03
241-S-A, 241-S-A Valve Pit, 241-S-A Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-B, 241-S-B Valve Pit, 241-S-B Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-C, 241-S-C Valve Pit, 241-S-C Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-D, 241-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-SX-101, 241-SX-TK-101 Active RL-TW03 RL-TW03 RL-TW03 241-SX-102, 241-SX-TK-102 Active RL-TW03 RL-TW03 RL-TW03 241-SX-103, 241-SX-TK-103 Active RL-TW03 RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-104 Active RL-TW03 RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-105 Active RL-TW03 RL-TW03 RL-TW03 241-SX-106, 241-SX-TK-106 Active RL-TW03 RL-TW03 RL-TW03 241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03			DI TWO		
241-S-B, 241-S-B Valve Pit, 241-S-B Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-C, 241-S-C Valve Pit, 241-S-C Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-D, 241-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-SX-101, 241-SX-TK-101 Active RL-TW03 RL-TW03 RL-TW03 241-SX-102, 241-SX-TK-102 Active RL-TW03 RL-TW03 RL-TW03 241-SX-103, 241-SX-TK-103 Active RL-TW03 RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-104 Active RL-TW03 RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-105 Active RL-TW03 RL-TW03 RL-TW03 241-SX-106, 241-SX-TK-106 Active RL-TW03 RL-TW03 RL-TW03 241-SX-107, 241-SX-TK-107 Active RL-TW03 RL-TW03 RL-TW03 241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-109 Active RL-TW03 RL-TW03 RL-TW03					
241-S-C, 241-S-C Valve Pit, 241-S-C Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-S-D, 241-S-D Valve Pit, 241-S-D Diversion Box Active RL-TW03 RL-TW03 RL-TW03 241-SX-101, 241-SX-TK-101 Active RL-TW03 RL-TW03 RL-TW03 241-SX-102, 241-SX-TK-102 Active RL-TW03 RL-TW03 RL-TW03 241-SX-103, 241-SX-TK-103 Active RL-TW03 RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-104 Active RL-TW03 RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-105 Active RL-TW03 RL-TW03 RL-TW03 241-SX-106, 241-SX-TK-106 Active RL-TW03 RL-TW03 RL-TW03 241-SX-107, 241-SX-TK-107 Active RL-TW03 RL-TW03 RL-TW03 241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-109 Active RL-TW03 RL-TW03 RL-TW03			RL-TW03		RL-TW04
241-SX-101, 241-SX-TK-101 Active RL-TW03 RL-TW03 RL-TW03 241-SX-102, 241-SX-TK-102 Active RL-TW03 RL-TW03 RL-TW03 241-SX-103, 241-SX-TK-103 Active RL-TW03 RL-TW03 RL-TW03 241-SX-104, 241-SX-TK-104 Active RL-TW03 RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-105 Active RL-TW03 RL-TW03 RL-TW03 241-SX-106, 241-SX-TK-106 Active RL-TW03 RL-TW03 RL-TW03 241-SX-107, 241-SX-TK-107 Active RL-TW03 RL-TW03 RL-TW03 241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-109 Active RL-TW03 RL-TW03 RL-TW03	241-S-C, 241-S-C Valve Pit, 241-S-C Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-SX-102, 241-SX-TK-102 Active RL-TW03 RL-TW03 RL-TW03 241-SX-103, 241-SX-TK-103 Active RL-TW03 RL-TW03 RL-TW03 241-SX-104, 241-SX-TK-104 Active RL-TW03 RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-105 Active RL-TW03 RL-TW03 RL-TW03 241-SX-106, 241-SX-TK-106 Active RL-TW03 RL-TW03 RL-TW03 241-SX-107, 241-SX-TK-107 Active RL-TW03 RL-TW03 RL-TW03 241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-109 Active RL-TW03 RL-TW03 RL-TW03					RL-TW04
241-SX-103, 241-SX-TK-103 Active RL-TW03 RL-TW03 RL-TW03 241-SX-104, 241-SX-TK-104 Active RL-TW03 RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-105 Active RL-TW03 RL-TW03 RL-TW03 241-SX-106, 241-SX-TK-106 Active RL-TW03 RL-TW03 RL-TW03 241-SX-107, 241-SX-TK-107 Active RL-TW03 RL-TW03 RL-TW03 241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-109 Active RL-TW03 RL-TW03 RL-TW03					RL-TW04
241-SX-104, 241-SX-TK-104 Active RL-TW03 RL-TW03 RL-TW03 241-SX-105, 241-SX-TK-105 Active RL-TW03 RL-TW03 RL-TW03 241-SX-106, 241-SX-TK-106 Active RL-TW03 RL-TW03 RL-TW03 241-SX-107, 241-SX-TK-107 Active RL-TW03 RL-TW03 RL-TW03 241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-109 Active RL-TW03 RL-TW03 RL-TW03		_			
241-SX-105, 241-SX-TK-105 Active RL-TW03 RL-TW03 RL-TW03 241-SX-106, 241-SX-TK-106 Active RL-TW03 RL-TW03 RL-TW03 241-SX-107, 241-SX-TK-107 Active RL-TW03 RL-TW03 RL-TW03 241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-109 Active RL-TW03 RL-TW03 RL-TW03					RL-TW04
241-SX-107, 241-SX-TK-107 Active RL-TW03 RL-TW03 RL-TW03 241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-109 Active RL-TW03 RL-TW03 RL-TW03					RL-TW04
241-SX-108, 241-SX-TK-108 Active RL-TW03 RL-TW03 RL-TW03 241-SX-109, 241-SX-TK-109 Active RL-TW03 RL-TW03 RL-TW03	241-SX-106, 241-SX-TK-106				RL-TW04
241-SX-109, 241-SX-TK-109 Active RL-TW03 RL-TW03 RL-TW0					RL-TW04
	241-SX-110, 241-SX-TK-110	Active	RL-TW03	RL-TW03	RL-TW04
241-SX-111, 241-SX-TK-111 Active RL-TW03 RL-TW03 RL-TW0	241-SX-111, 241-SX-TK-111				RL-TW04
241-SX-112, 241-SX-TK-112 Active RL-TW03 RL-TW03 RL-TW0	241-SX-112, 241-SX-TK-112		RL-TW03	RL-TW03	RL-TW04
		_			RL-TW04
					RL-TW04 RL-TW04
					RL-TW04
					RL-TW04
241-SX-A, 241-SX-A Diversion Box Active RL-TW03 RL-TW03 RL-TW0	241-SX-A, 241-SX-A Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
					RL-TW04
					RL-TW04 RL-TW04
					RL-TW04
					RL-TW04
					RL-TW04

TABLE 4-2 River Protection Project Facility Life-Cycle Responsibility Assignments for Waste Sites (Continued)

waste Sites (Contin	lucu)	1 .	to Cuala Dha	
W 4 0%	.		ife Cycle Pha	
Waste Site	Status	O&M RL-TW03	Post Ops	D&D
241-T-105, 241-T-TK-105 241-T-106, 241-T-TK-106	Active Active	RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241-T-106, 241-T-1K-106 241-T-107, 241-T-TK-107	Active	RL-TW03	RL-TW03	RL-TW04
241-T-107, 241-T-1K-107	Active	RL-TW03	RL-TW03	RL-TW04
241-T-109, 241-T-TK-109	Active	RL-TW03	RL-TW03	RL-TW04
241-T-110, 241-T-TK-110	Active	RL-TW03	RL-TW03	RL-TW04
241-T-111, 241-T-TK-111	Active	RL-TW03	RL-TW03	RL-TW04
241-T-112, 241-T-TK-112	Active	RL-TW03	RL-TW03	RL-TW04
241-T-151, 241-T-151 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-T-153, 241-T-153 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-T-201, 241-T-TK-201	Active	RL-TW03	RL-TW03	RL-TW04
241-T-202, 241-T-TK-202	Active	RL-TW03	RL-TW03	RL-TW04
241-T-203, 241-T-TK-203	Active	RL-TW03	RL-TW03	RL-TW04
241-T-204, 241-T-TK-204	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241-T-252, 241-T-252 Diversion Box 241-T-301B, 241-T-301 Catch Tank, 241-T-301-B	Active	RL-17/03	RL-TW03	RL-TW04
241-T-301B, 241-T-301 Catch Fank, 241-T-301-B	Active	RL-TW03	RL-TW03	RL-TW03
241-T-362 241-T-361, 241-T-361 Settling Tank, 361-T-TANK	Active	RL-TW03	RL-TW03	RL-TW04
241-TR-152, 241-TR-152 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-TR-153, 241-TR-153 Diversion Box, 241-TR-153 Booster Pump Pit	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-101, 241-TX-101	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-102, 241-TX-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-103, 241-TX-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-104, 241-TX-TK-104	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-105, 241-TX-TK-105	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-106, 241-TX-TK-106	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-107, 241-TX-TK-107	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-108, 241-TX-TK-108	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-109, 241-TX-TK-109	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-110, 241-TX-TK-110	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-111, 241-TX-TK-111	Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04
241-TX-112, 241-TX-TK-112 241-TX-113, 241-TX-TK-113	Active Active	RL-TW03	RL-TW03	RL-TW04 RL-TW04
241-TX-113, 241-TX-TK-113 241-TX-114, 241-TX-TK-114	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-115, 241-TX-TK-115	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-116, 241-TX-TK-116	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-117, 241-TX-TK-117	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-118, 241-TX-TK-118	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-153, 241-TX-153 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-302A, 241-TX-302-A Catch Tank	Active	RL-TW03	RL-TW03	RL-TW04
241-TX-302XB, 241-TX-302B Catch Tank, 241-TX-302-X, 241-TX-302-X (B)	Active		RL-TW03	RL-TW04
241-TXR-151, 241-TXR-151 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW03
241-TXR-152, 241-TXR-152 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-TXR-153, 241-TXR-153 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-TY-101, 241-TY-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-TY-102, 241-TY-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-TY-103, 241-TY-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-TY-104, 241-TY-TK-104	Active	RL-TW03	RL-TW03	RL-TW04
241-TY-105, 241-TY-TK-105	Active	RL-TW03	RL-TW03	RL-TW04
241-TY-106, 241-TY-TK-106	Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04
241-TY-153, 241-TY-153 Diversion Box 241-TY-302A, 241-TY-302-A Catch Tank	Active Active	KE-17003	RL-TW03	RL-TW04 RL-TW04
241-TY-302A, 241-TY-302-A Catch Tank 241-TY-302B, 241-TY-302-B Catch Tank	Active	+	RL-TW03	RL-TW04
241-U-101, 241-U-TK-101	Active	RL-TW03	RL-TW03	RL-TW03
241-U-102, 241-U-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-U-103, 241-U-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-U-104, 241-U-TK-104	Active	RL-TW03	RL-TW03	RL-TW04
241-U-105, 241-U-TK-105	Active	RL-TW03	RL-TW03	RL-TW04
241-U-106, 241-U-TK-106	Active	RL-TW03	RL-TW03	RL-TW04
241-U-107, 241-U-TK-107	Active	RL-TW03	RL-TW03	RL-TW04
241-U-108, 241-U-TK-108	Active	RL-TW03	RL-TW03	RL-TW04
241-U-109, 241-U-TK-109	Active	RL-TW03	RL-TW03	RL-TW04
241-U-110, 241-U-TK-110	Active	RL-TW03	RL-TW03	RL-TW04
241-U-111, 241-U-TK-111	Active	RL-TW03	RL-TW03	RL-TW04
241-U-112, 241-U-TK-112	Active	RL-TW03	RL-TW03	RL-TW04
241-U-201, 241-U-TK-201	Active	RL-TW03	RL-TW03	RL-TW04
241-U-202, 241-U-TK-202	Active	RL-TW03	RL-TW03	RL-TW04
241-U-203, 241-U-TK-203	Active	RL-TW03	RL-TW03	RL-TW04

TABLE 4-2 River Protection Project Facility Life-Cycle Responsibility Assignments for Waste Sites (Continued)

,	, ,	1 1	ife Cycle Pha	250
Waste Site	Status	O&M	Post Ops	D&D
241-U-204, 241-U-TK-204	Active	RL-TW03	RL-TW03	RL-TW04
242-T-135	Active		RL-TW03	RL-TW03
242-TA-R1, 242-TA, Receiver TK-Vault, 242-TA Receiver Tank Vault, Z	Active		RL-TW03	RL-TW03
Waste, Receiver Tank TK-R1			<u> </u>	
244-CR VAULT, 244-CR Vault	Active	RL-TW03	RL-TW03	RL-TW03
244-TX DCRT, 244-TX Double-Contained Receiver Tank, 244-TX RT,	Active	RL-TW03	RL-TW03	RL-TW04
244-TX Receiver Tank, 244-TX Receiver Vessel, 244-TX-TK/SMP 244-TXR VAULT, 244-TXR, 244-TXR Vault (Tanks TXR-001, -002, -003)	Active	+	RL-TW03	RL-TW03
241-A-702-WS-1, 702-A Drain Lines	Active	RL-TW03	RL-TW03	RL-TW03
241-A-A, 241-A-A Diversion Box, 241-A-A Structural Valve Pit	Active	RL-TW03	RL-TW03	RL-TW04
241-A-B, 241-A-B Diversion Box, 241-A-B Structural Valve Pit	Active	RL-TW03	RL-TW03	RL-TW04
241-AN-101, 241-AN-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-AN-102, 241-AN-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-AN-103, 241-AN-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-AN-104, 241-AN-TK-104	Active	RL-TW03	RL-TW03	RL-TW04
241-AN-105, 241-AN-TK-105	Active	RL-TW03	RL-TW03	RL-TW04
241-AN-106, 241-AN-TK-106 241-AN-107, 241-AN-TK-107	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241-AN-A, 241-AN-A Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-AN-B, 241-AN-B Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-AP VP, 241-AP Valve Pit	Active	RL-TW03	RL-TW03	RL-TW04
241-AP-101, 241-AP-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-AP-102, 241-AP-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-AP-103, 241-AP-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-AP-104, 241-AP-TK-104	Active	RL-TW03	RL-TW03	RL-TW04
241-AP-105, 241-AP-TK-105	Active	RL-TW03	RL-TW03	RL-TW04
241-AP-106, 241-AP-TK-106	Active	RL-TW03	RL-TW03	RL-TW04
241-AP-107, 241-AP-TK-107 241-AP-108, 241-AP-TK-108	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241-AR-151, 241-AR-151 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-AW-101, 241-AW-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-AW-102, 241-AW-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-AW-103, 241-AW-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-AW-104, 241-AW-TK-104	Active	RL-TW03	RL-TW03	RL-TW04
241-AW-105, 241-AW-TK-105	Active	RL-TW03	RL-TW03	RL-TW04
241-AW-106, 241-AW-TK-106	Active	RL-TW03	RL-TW03	RL-TW04
241-AW-A, 241-AW-A Valve Pit, 241-AW-A Diversion Box	Active	RL-TW03 RL-TW03	RL-TW03	RL-TW04
241-AW-B, 241-AW-B Valve Pit, 241-AW-B Diversion Box 241-AX-151, 241-AX-151 Diversion Box, 241-AX-151 Diverter Station	Active Active	RL-17/03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
241-AX-152CT, 241-AX-152-CT Catch Tank	Active	RL-TW03	RL-TW03	RL-TW04
241-AY-101, 241-AY-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-AY-102, 241-AY-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-AY-151, 241-AY-151 Diversion Box, 241-AY-151 Pump Out Pit	Active	RL-TW03	RL-TW03	RL-TW04
241-AY-152, 241-AY-152 Diverter Station, 241-AY-152 Sluice Transfer Box	Active	RL-TW03	RL-TW03	RL-TW04
241-AZ-101, 241-AZ-TK-101	Active	RL-TW03	RL-TW03	RL-TW04
241-AZ-102, 241-AZ-TK-102 241-AZ-151CT, 241-AZ-151-CT Catch Tank	Active	RL-TW03 RL-TW03	RL-TW03	RL-TW04 RL-TW04
241-AZ-151C1, 241-AZ-151-C1 Catch Tank 241-AZ-151DS, 241-AZ-151-DS Diverter Station, 241-AZ-151 Diverter	Active Active	RL-TW03	RL-TW03 RL-TW03	RL-TW04 RL-TW04
Station	Active	IKL-1 W03	KL-17703	KL-17004
241-AZ-152, 241-AZ-152 Diversion Box, 241-AZ-152 Sluice Transfer Box	Active	RL-TW03	RL-TW03	RL-TW04
241-ER-153, 241-ER-153 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
244-A DCRT, 244-A Double-Contained Receiver Tank, 244-A RT, 244-A	Active	RL-TW03	RL-TW03	RL-TW04
Receiver Tank, 244-A-TK/SMP				
244-A LS, 244-A Lift Station, 244-AR Lift Station, 244-AR LS	Active	RL-TW03	RL-TW03	RL-TW03
244-AR VAULT, 244-AR Vault	Active		RL-TW03	RL-TW03
244-CR-WS-1, 244-CR French Drain	Active	RL-TW03	RL-TW03	RL-TW03
2607-E10	Active	RL-TW03	RL-TW03	RL-TW03
2607-ED	Active	RL-TW03	RL-TW03 RL-TW03	RL-TW03
2607-EG GTF. Grout Treatment Facility	Active Active	RL-TW03 RL-TW03	RL-TW03	RL-TW03 RL-TW03
GTFL, Grout Treatment Facility Landfill, GTF Vaults, PSW Vault	Active	RL-TW03	RL-TW03	RL-TW03
UPR-200-E-100, Radioactive Spill Near 244-A Lift Station, UN-216-E-100,	Active	111111111111111111111111111111111111111	RL-TW03	RL-TW03
UN-216-E-29, UN-200-E-100	1	1	1	
UPR-200-E-107, UN-200-E-107	Active		RL-TW03	RL-TW03
UPR-200-E-115, UN-200-E-115	Active		RL-TW03	RL-TW03
UPR-200-E-118, UN-200-E-118	Active		RL-TW03	RL-TW03
UPR-200-E-119, UN-200-E-119	Active	<u> </u>	RL-TW03	RL-TW03
UPR-200-E-125, UN-200-E-125	Active	1	RL-TW03	RL-TW03

TABLE 4-2 River Protection Project Facility Life-Cycle Responsibility Assignments for Waste Sites (Continued)

waste Sites (Contin	1			
W O'			ife Cycle Pha	
Waste Site	Status	O&M	Post Ops	D&D
UPR-200-E-126, UN-200-E-126 UPR-200-E-136, UN-200-E-136	Active Active		RL-TW03 RL-TW03	RL-TW03 RL-TW03
UPR-200-E-137, UN-200-E-137	Active		RL-TW03	RL-TW03
UPR-200-E-27, UN-200-E-27	Active		RL-TW03	RL-TW03
UPR-200-E-47, UN-200-E-47	Active		RL-TW03	RL-TW03
UPR-200-E-48, UN-200-E-48	Active		RL-TW03	RL-TW03
UPR-200-E-59, Contaminated Bird Nests and Mud at 216-A-40 and 244-AR			RL-TW03	RL-TW03
Vault, UN-200-E-59				
UPR-200-E-68, Radioactive Contamination near 244-AR Vault,	Active		RL-TW03	RL-TW03
UN-216-E-68, UN-200-E-68				
UPR-200-E-72, Radioactive Contamination from Uncovered Buried Waste,	Active		RL-TW03	RL-TW03
UN-200-E-72				
UPR-200-E-81, UN-216-E-9, 241-CR-151 Line Break, UN-200-E-81	Active		RL-TW03	RL-TW03
UPR-200-E-82, UN-216-E-10, 241-C-152 Line Break, UN-200-E-82, B Plant	Active		RL-TW03	RL-TW03
Ion Exchange Feed Line Leak			DI TIMO	DI TIMOS
UPR-200-E-91, UN-216-E-19, UN-200-E-91	Active		RL-TW03	RL-TW03
UPR-200-E-99, UN-216-E-27, Contamination Adjacent to 244-CR Vault,	Active		RL-TW03	RL-TW03
UN-200-E-99 241-U-361, 241-U-361 Settling Tank, 361-U-TANK	Active	RL-TW03	RL-TW03	RL-TW04
270-W, 270-W Tank, 270-W Neutralization Tank	Active	IXL-17003	RL-TW03	RL-TW04
216-A-8, 216-A-8 Crib	Active	1	RL-TW03	RL-ER02
209-E-WS-3, Critical Mass Laboratory Valve Pit and Hold Up Tank	Active	RL-TW03	RL-TW03	RL-ER02
(209-E-TK-111)		-		
216-C-7, 216-C-7 Crib	Active	İ	RL-TW03	RL-ER02
216-U-16, UO3 Crib	Active		RL-TW03	RL-ER02
216-U-17	Active		RL-TW03	RL-ER02
UPR-200-E-145, W049H Green Soil	Active		RL-TW03	RL-ER02
216-B-62, 216-B-62 Enclosed Trench, 216-B-62 Crib	Active		RL-TW03	RL-ER02
231-W-151, 231-W-151 Vault, 231-W-151-001 (Tank), 231-W-151-002	Active		RL-TW03	RL-ER02
(Tank), 231-W-151 Sump, 231-Z-151 Sump				
241-Z-8, 241-Z-TK-8, Silica Slurry Tank, 216-Z-8	Active		RL-TW03	RL-ER02
UPR-200-W-130, Line Leak at 231-W-151 Sump, UN-200-W-130	Active		RL-TW03	RL-ER02
UPR-200-W-20, UN-200-W-20	Active	DI TWO	RL-TW03	RL-ER02
200-W-51, Septic Tank (Abandoned) 241-SY-101, 241-SY-TK-101	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-TW03 RL-TW04
241-SY-101, 241-SY-TK-101 241-SY-102, 241-SY-TK-102	Active	RL-TW03	RL-TW03	RL-TW04
241-SY-103, 241-SY-TK-103	Active	RL-TW03	RL-TW03	RL-TW04
241-SY-B, 241-SY-B Diversion Box, 241-SY-B Valve Pit	Active	RL-TW03	RL-TW03	RL-TW04
242-S, 242-S Evaporator	Active	RL-TW03	RL-TW03	RL-TW03
244-S DCRT, 244-S Double-Contained Receiver Tank, 244-S RT, 244-S	Active	RL-TW03	RL-TW03	RL-ER02
Receiver Tank, 244-S Catch Station, 244-S-TK/SMP				
UPR-200-W-140	Active		RL-TW03	RL-TW03
UPR-200-W-141	Active		RL-TW03	RL-TW03
UPR-200-W-142	Active		RL-TW03	RL-TW03
UPR-200-W-143	Active		RL-TW03	RL-TW03
UPR-200-W-144	Active		RL-TW03	RL-TW03
UPR-200-W-145	Active		RL-TW03	RL-TW03
UPR-200-W-146	Active		RL-TW03	RL-TW03
UPR-200-W-50, UN-200-W-50 UPR-200-W-80, UN-200-W-80	Active Active	1	RL-TW03 RL-TW03	RL-TW03 RL-TW03
UPR-200-W-81, UN-200-W-81	Active	1	RL-TW03	RL-TW03
UPR-200-W-81, UN-200-W-81	Active		RL-TW03	RL-TW03
216-A-30, 216-A-30 Crib	Active		RL-TW03	RL-FR02
216-A-37-2, 216-A-37-2 Crib	Active	1	RL-TW03	RL-ER02
216-B-55, 216-B-55 Enclosed Trench, 216-B-55 Crib	Active		RL-TW03	RL-ER02
216-S-25, 216-S-25 Crib	Active	1	RL-TW03	RL-ER02
200-E-24, 6607-11, 2704-HV Septic System	Active	RL-TW03	RL-TW03	RL-ER02
2607-E12, 2607-E12 Septic System	Active	RL-TW03	RL-TW03	RL-ER02
2607-E5	Active	RL-TW03	RL-TW03	RL-ER02
2607-E7A, 2607-E7	Active	RL-TW03	RL-TW03	RL-ER02
2607-E7B, 2607-E	Active	RL-TW03	RL-TW03	RL-ER02
2607-EC	Active	RL-TW03	RL-TW03	RL-ER02
2607-W9	Active	RL-TW03	RL-TW03	RL-ER02
2607-WC, 2607-WC Septic System	Active	RL-TW03	RL-TW03	RL-ER02
2607-WL, 2607-WL Septic System 200-W-10, Item 10 (RCRA General Inspection), Grout Wall Test	Active	RL-TW03	RL-TW03	RL-ER02
200-W-10, Item 10 (RCRA General Inspection), Grout Wall Test 200-W-13, 2713-WB Green Hut Complex	Active Active	RL-TW03 RL-TW03	RL-TW03 RL-TW03	RL-ER02 RL-ER02
UPR-200-W-76, UN-200-W-76	Active	IXE-1 WU3	RL-TW03	RL-ER02
OF IX 200-11 TO, ON 200-11 TO	, IOUVE	1	INE I VVUS	INC LINUZ

TABLE 4-2 River Protection Project Facility Life-Cycle Responsibility Assignments for Waste Sites (Continued)

,	-	l 1	ise	
Waste Site	Status	O&M	ife Cycle Pha	D&D
200-W-53, UPR-200-W-166, UN-216-W-31	Active	RL-TW03	RL-TW03	RL-ER02
242-T, 241-T-Evaporator	Active	RL-TW03	RL-TW03	RL-TW03
242-T-151, 242-T-151 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW03
2607-WT	Active	RL-TW03	RL-TW03	RL-TW03
2607-WTX	Active	RL-TW03	RL-TW03	RL-TW03
UPR-200-W-100, UN-216-W-8, 105-TX to 118-TX Process Line Leak,	Active	IKE TWOS	RL-TW03	RL-TW03
UN-200-W-100, ON 210 W 6, 103 1X to 110 1X 1 10ccss Line Leak,	Active		IKE-1W03	IKE TWOS
UPR-200-W-100	Active		RL-TW03	RL-TW03
UPR-200-W-126	Active		RL-TW03	RL-TW03
UPR-200-W-129	Active		RL-TW03	RL-TW03
UPR-200-W-149	Active		RL-TW03	RL-TW03
UPR-200-W-150	Active		RL-TW03	RL-TW03
UPR-200-W-151	Active		RL-TW03	RL-TW03
UPR-200-W-152	Active		RL-TW03	RL-TW03
UPR-200-W-153	Active		RL-TW03	RL-TW03
UPR-200-W-17, UN-200-W-17	Active		RL-TW03	RL-TW03
200-W-52, 216-T-7 Crib, 241-T-3 Crib	Active	RL-TW03	RL-TW03	RL-TW03
241-T-152, 241-T-152 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
UPR-200-W-147	Active	1	RL-TW03	RL-TW03
UPR-200-W-148	Active	1	RL-TW03	RL-TW03
UPR-200-W-62, UN-200-W-62	Active	1	RL-TW03	RL-TW03
UPR-200-W-7, Contamination Spread from the 241-T-151 and 241-T-152	Active	i	RL-TW03	RL-TW03
Diversion Boxes, UN-200-W-7			1	
216-T-32, 241-T #1 & 2 Cribs, 216-T-6	Active		RL-TW03	RL-ER02
2727-WA, 2727-WA SRE Sodium Storage Building	Active	RL-TW03	RL-TW03	RL-ER02
241-U-153, 241-U-153 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-U-252, 241-U-252 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-U-301, 241-U-301B	Active	RL-TW03	RL-TW03	RL-TW04
241-U-A, 241-U-A Diversion Box, 241-U-A Valve Pit	Active	RL-TW03	RL-TW03	RL-TW04
241-U-B, 241-U-B Diversion Box, 241-U-B Valve Pit	Active	RL-TW03	RL-TW03	RL-TW04
241-U-C, 241-U-C Diversion Box, 241-U-C Valve Pit	Active	RL-TW03	RL-TW03	RL-TW04
241-U-D, 241-U-D Diversion Box, 241-U-D Valve Pit	Active	RL-TW03	RL-TW03	RL-TW04
241-UR-151, 241-UR-151 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-UR-152, 241-UR-152 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-UR-153, 241-UR-153 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
241-UR-154, 241-UR-154 Diversion Box	Active	RL-TW03	RL-TW03	RL-TW04
244-U DCRT, 244-U Double-Contained Receiver Tank, 244-U RT, 244-U	Active		RL-TW03	RL-TW03
Receiver Tank, 244-U Receiving Vault, 244-U-TK/SMP	, 10 0		1.2	
2607-WUT	Active	RL-TW03	RL-TW03	RL-TW03
UPR-200-W-128	Active	IXE TWOO	RL-TW03	RL-TW03
UPR-200-W-132, UN-200-W-132	Active		RL-TW03	RL-TW03
UPR-200-W-154	Active	1	RL-TW03	RL-TW03
UPR-200-W-155	Active		RL-TW03	RL-TW03
UPR-200-W-156	Active	1	RL-TW03	RL-TW03
UPR-200-W-157	Active	i	RL-TW03	RL-TW03
UPR-200-E-143, Contamination Adjacent to 244-AR Lift Station,	Active	 	RL-TW03	RL-ER02
UN-216-E-43		1	1	1
UPR-200-E-144, Soil Contamination North of 241-B, UN-216-E-44	Active	 	RL-TW03	RL-ER02
UPR-200-W-127. Liquid Release from 242-S Evaporator to the Ground.	Active	 	RL-TW03	RL-ER02
UN-200-W-127, Elquid Release noni 242-3 Evaporator to the Ground,	, 101110			11.02
UPR-200-W-14, Waste Line Leak at 242-T Evaporator, UN-200-W-14	Active	 	RL-TW03	RL-ER02
UPR-200-W-14, Waste Line Leak at 242-1 Evaporation, ON-200-W-14 UPR-200-W-51, Release from 241-S Diversion Box, UN-200-W-51,	Active	-	RL-TW03	RL-ER02
UPR-200-W-51, Release from 241-3 Diversion Box, GN-200-W-51,	ACTIVE	1	1,75-1,4403	INL-LINUZ
UPR-200-W-52 UPR-200-W-52, Release from 241-S Diversion Box, UN-200-W-52	Active	 	RL-TW03	RL-ER02
UPR-200-W-52, Release from 241-3 Diversion Box, ON-200-W-52 UPR-200-W-67, Contamiantion near 2706-T, UN-200-W-67	Active	 	RL-TW03	RL-ER02
UPR-200-W-89, Radioactive Contamination Southwest of 236-Z Building,	Rejected(Pro	RL-TW04	111111111111111111111111111111111111111	INC-LINUZ
UN-216-W-89. UN-200-W-89	posed)	_ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	1	
200-W-34, 272-WA Septic System North of 213W	Active	RL-TW03	RL-TW03	RL-TW03
213-W, 213-W Compactor Facility	Active	RL-TW03	RL-TW03	RL-TW03
213-W, 213-W Compactor Facility 213-W-1, 213-W-TK-1, 213-W Compactor Facility Retention Tank				
REDOX	Active	RL-TW03	RL-TW03	RL-ER02 RL-ER06
NEDUA	Active	1	1	
044CV404	A atiu o	DI TMO	DI TIMO	RL-ER07
241\$X401	Active	RL-TW03	RL-TW03	RL-TW04
241SX402	Active	RL-TW03	RL-TW03	RL-TW04

TABLE 4-2 River Protection Project Facility Life-Cycle Responsibility Assignments for Waste Sites (Continued)

		Life Cycle Phase		
Waste Site	Status	O&M	Post Ops	D&D
Tank Farm System	Active	RL-TW01	RL-TW03	RL-TW04
		RL-TW02		
		RL-TW03		
		RL-TW04		
CC Soil Site Operable Units	Active		RL-ER02	RL-ER02
				RL-ER07
241-EW-151, 241-EW-151 Vent Station Catch Tank, 241-EW-151 Vent	Active	RL-TW03	RL-TW03	RL-ER02
Station, Vent Station, 200 Area East-West Vent Station				

* RL PBS Identifier Index:

RL-ER02 - 200 Area Source Remedial Action

RL-ER05 - Surveillance & Maintenance

RL-ER06 - Decontamination & Decommissioning

RL-ER07 - Long Term Surveillance & Maintenance

RL-TP01 - B-Plant

RL-TW01 - Tank Waste Characterization

RL-TW02 - Tank Safety Issue Resolution

RL-TW03 - Tank Farm Operations

RL-TW04 - Retrieval

4.2.1.e Performance Measures

Performance measures are used to monitor both mission and corporate management. In this document, our focus is on mission management. There are two types of mission-focused performance measures. First, there are performance measures that monitor the progress made on activities that must be completed to enable a key step in waste/material cleanup to occur. These activities may involve activities such as facility and system upgrades, tank waste characterizations, assessments of tank safety issues, regulatory permits, and the design of waste treatment and storage facilities.

Second, there are performance measures that track the progress made in the processing of wastes and other materials (including facilities). These "process" measures monitor changes in waste/material form, storage method, and location. These measures are important because they are directly linked to two key Success Indicators - the reduction in the level of active management required for the inventory and the reduction in the hazard posed by the waste/material. Process measures will monitor the waste/material during each major processing step as the material transitions from its initial configuration within the single-shell or double-shell tanks (or associated equipment) to the configuration described by the appropriate endpoint target. Endpoint targets for the TWRS mission are presented in the Hanford Strategic Plan and are included in the Facility Life-Cycle Requirements Section for each project that comprises this mission.

4.2.1.1 Tank Waste Characterization

4.2.1.1.1 Project Description Summary

The Tank Waste Characterization Project was established to characterize the Hanford Site

high-level radioactive waste to aid the safe storage, retrieval, processing, and disposal of this waste. This waste is stored in large, underground, radioactive waste storage double-shell tanks (DSTs) and single-shell tanks (SSTs). The work involved is to plan, sample, analyze, and report tank waste contents. Activities include; program management, characterization data development, sampling equipment, acquire samples and measurements, and sample analyses.

4.2.1.1.2 Life-Cycle Material and Waste Flow

This project has no responsibility for managing waste inventory.

4.2.1.1.3 Facility Life-Cycle Requirements

- Requirements
 - The Hanford radioactive tank wastes, presently stored in 177 underground storage tanks and other miscellaneous underground tanks, shall be characterized.
- Planning Assumptions
 - None

4.2.1.1.4 Project Safety Authorization Basis/NEPA and Permits

The Authorization Basis consists of those aspects of the facility design basis and operational requirements relied upon by the DOE to authorize operation. These aspects are considered important to the safety of the facility operations. The complete list of documents that comprise the Authorization Basis for TWRS facilities and activities is provided in Attachment A of HNF-IP-0842, TWRS Administration, Volume IV, Section 5.4, "Unreviewed Safety Questions" (FDH 1998a).

The Tank Waste Characterization Project operates under the requirements of DOE/EA-0915, Environmental Assessment - Waste Tank Safety Program, Hanford Site, Richland, Washington (RL 1994), which was issued for compliance with NEPA. In addition, DOE/EIS-0212, Safe Interim Storage of Hanford Tank Waste Final Environmental Impact Statement (SIS EIS) (RL and Ecology 1995) was issued in October 1995. Subsequently, the DOE issued the Record of Decision (ROD): Safe Interim Storage of Hanford Tank Wastes, Hanford Site, Richland, WA (DOE 1995a) on November 21, 1995, following concurrence by the State of Washington. Additional environmental permits required for compliance with federal and state air pollution regulations are developed and approved as needed on a project-specific basis. State air pollution permits also activate the State Environmental Policy Act of 1971 requirements and are also addressed on a project-specific basis.

4.2.1.1.5 Tri-Party Agreement Requirements

• TPA.M.44.0.A Complete delivery of information requirements as identified in the annually submitted WIRD. [Due Date: 9/30/2002]

4.2.1.1.6 Interfaces

TABLE 4-3 Tank Waste Characterization Interfaces

	Project	
Project Title	Number	Interface
Tank Farm Operations	RL-TW03	Provides DST Waste for Sampling
		Provides SST Waste for Sampling
Analytical Services	RL-WM06	Receives DST Samples
-		Receives SST Samples

4.2.1.1.7 Requirements References

 DOE/RL-89-10, Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), Revision 5"

4.2.1.2 Tank Safety Issue Resolution

4.2.1.2.1 Project Description Summary

The purpose of this project is to provide an adequate, comprehensive, and reliable safety basis for the management and storage of waste by River Protection Project (RPP). This will be accomplished by developing and maintaining an integrated Authorization Basis (AB) and by resolving outstanding safety issues to ensure safe storage of waste.

The Tank Safety Issue Resolution Project was established to address hazards associated with the storage of radioactive mixed waste in the large underground storage tanks at the Hanford Site. Safety issues have been raised for single-shell tanks (SSTs), double-shell tanks (DSTs) and ancillary facilities with regard to flammable gas and organic complexants. In response to Public Law 101-510, Section 3137, "Safety Measures for Waste Tanks at Hanford Nuclear Reservation", tanks of the highest concern have been placed on the Watch List. This project develops the technical basis for closure of Unreviewed Safety Questions (USQ), resolution of the safety issues, and removal of all tanks from the Watch List. It also supports upgrades to the Final Safety Analysis Report (FSAR), which is the authorization basis for safe operations of the tank farms and continued safe storage of the tank contents.

4.2.1.2.2 Life-Cycle Material and Waste Flow

This project has no responsibility for managing waste inventory.

4.2.1.2.3 Facility Life-Cycle Requirements

- Requirements
 - Tank safety issues for high priority tanks shall be resolved by Sep 30, 2001
- Planning Assumptions
 - None

4.2.1.2.4 Project Safety Authorization Basis/NEPA and Permits

The Authorization Basis consists of those aspects of the facility design basis and operational requirements relied upon by the DOE to authorize operation. This project exists primarily because conditions may be present which are not adequately covered by an Authorization Basis. The complete list of documents that comprise the Authorization Basis for TWRS facilities and activities is provided in Attachment A of HNF-IP-0842, TWRS Administration, Volume IV, Section 5.4, "Unreviewed Safety Questions" (FDH 1998a).

The Tank Safety Issue Resolution Project operates under the requirements of DOE/EA-0915, Environmental Assessment - Waste Tank Safety Program, Hanford Site, Richland, Washington (RL 1994), which was issued for compliance with NEPA. In addition, DOE/EIS-0212, Safe Interim Storage of Hanford Tank Waste Final Environmental Impact Statement (SIS EIS (RL and Ecology 1995) was issued in October 1995. Subsequently, the DOE issued the Record of Decision (ROD): Safe Interim Storage of Hanford Tank Wastes, Hanford Site, Richland, WA (DOE 1995a) on November 21, 1995, following concurrence by the State of Washington. Additional environmental permits required for compliance with federal and state air pollution regulations are developed and approved as needed on a project-specific basis.

4.2.1.2.5 Tri-Party Agreement Requirements

• TPA.M.40.0 Mitigate/resolve tank safety issues for high priority watch list tanks. [Due Date: 9/30/2001]

4.2.1.2.6 Interfaces

TABLE 4-4 Tank Safety Issue Resolution Interfaces

Project Title	Project Number	Interface
Tank Farm Operations		Provides Conditions of Operations Receives Authorization Basis

4.2.1.2.7 Requirements References

 DOE/RL-89-10, Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), Revision 5"

4.2.1.3 Tank Farm Operations

4.2.1.3.1 Project Description Summary

Tank Farms Operations operates and maintains the RPP mission required tank farm systems, structures and components (SSCs) in a safe, reliable, and operable condition to meet mission requirements. The technical approach to Tank Farms Operations is to conduct all activities pertaining to the operation of a permitted treatment, storage, and disposal (TSD) facility within the boundary of the current Authorization Basis and in a manner that ensures compliance with all applicable federal, state, and local laws and regulations. (In addition, ensuring a safe working environment for all employees and support groups is a top priority.) This performs all operations support functions required for routine surveillance, operation, and maintenance of the 200 East Area and 200 West Area tank farms. These functions include:

- · Performing preventative and corrective maintenance (routine and non-routine)
- · Performing waste transfers to feed tanks in support of waste concentration operations
- Conducting health physics activities (radiological)
- Conducting routine surveillance monitoring
- · Conducting industrial hygiene and safety functions
- · Performing engineering and analysis (trade studies and analysis capability upgrades)
- · Managing and controlling projects and upgrades to facilities and infrastructure
- Enhancing the safety of facility operations and preparing the facilities for the eventual turnover to the Retrieval Project for closure.

In addition the Tank Farms Operations has the mandate to pump interstitial liquids from the aging, single shell tanks in the 200 Area Tank Farms and transfer it to the safer, compliant double shell tanks in accordance with the Consent Decree, Tri-Party Agreement milestones and other schedules as set by the Department of Energy (DOE).

4.2.1.3.2 Life-Cycle Material and Waste Flow

The following tables contain the waste forecasts by facility and waste category that the project is planning to receive or generate over the full life cycle of the project's involvement with the facilities listed. The values listed are forecasts and not requirements allocated to the projects.

Table 4-5 Tank Farm Operations Waste/Material Flow (In)

Major Facility	Category	Period	Value	Units
Tank Farm System	HLW	2000 - 2018	51200	cubic meters

Table 4-6 Tank Farm Operations Waste/Material Flow (Out)

Major Facility	Category	Period	Value	Units
Tank Farm System	CH LĽMŴ I	2000 - 2032	3030	cubic meters
	CH LLMW III	2000 - 2032	1970	cubic meters
	CH LLW I	2000 - 2032	10000	cubic meters
	HAZ	2000 - 2031	228.0	cubic meters
	HLW	2000 - 2018	77100	cubic meters
	RH LLMW I	2000 - 2032	821.0	cubic meters
	RH LLMW III	2000 - 2031	416.0	cubic meters
	Sanitary Liquid Waste	2000 - 2006	1.4	Mgal
	Sanitary Solid Waste	2000 - 2006	4640	tons
	Treated Liquid Effluent	2000 - 2018	188000	cubic meters

4.2.1.3.3 Facility Life-Cycle Requirements

Requirements

- · Single shell tanks shall be interim stabilized.
- Tank Farm upgrades shall be completed by June 30, 2005
- · 244AR interim actions shall be completed.

Planning Assumptions

- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated condition
- · Facilities shall be maintained within the approved safety envelope
- Double Shell Tank facilities shall be maintained within the approved safety envelope
- Miscellaneous Underground Storage Tanks shall be maintained within the approved safety envelope
- Single Shell Tank facilities shall be maintained within the approved safety envelope

4.2.1.3.4 Project Safety Authorization Basis/NEPA and Permits

The Authorization Basis consists of those aspects of the facility design basis and operational requirements relied upon by the DOE to authorize operation. These aspects are considered important to the safety of the facility operations. The complete list of documents that comprise the Authorization Basis for TWRS facilities and activities is provided in Attachment A of HNF-IP-0842, TWRS Administration, Volume IV, Section 5.4, "Unreviewed Safety Questions" (FDH 1998a).

To comply with NEPA requirements, the DOE and the Washington State Department of Ecology (Ecology) jointly prepared DOE/EIS-0212, Safe Interim Storage of Hanford Tank Waste Final Environmental Impact Statement (SIS EIS) (RL and Ecology 1995). Subsequently, the DOE issued the Record of Decision (ROD): Safe Interim Storage of Hanford Tank Wastes, Hanford Site, Richland, WA (DOE 1995a) on November 21, 1995, following concurrence by the State of Washington.

The SSTs are currently operating in accordance with RCRA interim status requirements and will go directly to closure following retrieval. The DSTs are currently operating under RCRA interim status, and a RCRA final status permit (Part B) application is scheduled for submittal to Ecology in 2000. New project construction must be within the scope of the existing interim status or final status permits or a new or revised permit must be obtained before construction or operation.

4.2.1.3.5 Tri-Party Agreement Requirements

- TPA.M.17.0.B Complete implementation of "Best Available Technology/All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment (BAT/AKART) for all phase II liquid effluent streams at the Hanford Site. [Due Date: 1/31/98.]
- TPA.M.32.6 Complete 244-AR vault interim status tank actions. [Due Date: TBD]
- TPA.M.41.0 Complete interim stabilization activities for all single-shell tanks except 241-C-106 (to be retrieved in accordance with milestone M-45-03). Complete intrusion prevention for all single-shell tanks except 241-C-106. [Due Date: 9/30/2000]
- TPA.M.42.0 Provide additional Double Shell Tank Capacity, TBD.
- TPA.M.43.0 Complete tank farm upgrades. [Due Date: 6/30/2005]
- TPA.M.43.13 Start construction for upgrades in the second tank farm. [Due Date: 6/30/2000]
- TPA.M.43.14 Start construction for upgrades in the third tank farm. [Due Date: 3/31/2001]
- TPA.M.43.15 Start construction for upgrades in the fourth tank farm. [Due Date: 3/31/2002]
- TPA.M.43.16 Start construction for upgrades in the fifth tank farm. [Due Date: 6/30/2003]

4.2.1.3.6 Interfaces

TABLE 4-7 Tank Farm Operations Interfaces

	Project	
Project Title	Number	Interface
Hazardous Waste Disposal Contracts	EXTERNAL	Receives TF OPER, HAZ
Offsite Landfill	EXTERNAL	Receives TWRS Sanitary Solid Waste
Hanford Legacy	EXTERNAL	Provides Existing DST Waste
		Provides Existing SST/MUST Waste
Tank Waste Characterization	RL-TW01	Receives DST Waste for Sampling
		Receives SST Waste for Sampling
Tank Safety Issue Resolution	RL-TW02	Provides Authorization Basis
		Receives Conditions of Operations

TABLE 4-7 Tank Farm Operations Interfaces (Continued)

	Project	
Project Title	Number	Interface
Retrieval	RL-TW04	Provides DST Waste
	1	Provides Empty DSTs
		Provides Empty SSTs
		Provides Excess DST System Facilities
		Provides Excess SST System Facilities
		Provides Retrieved SST Waste, Phase I
		Provides Retrieved SST Waste, Phase II
		Receives Safe & Compliant Deactivated Double Shell Tank System
		Facilities
		Receives Safe & Compliant Deactivated Single Shell Tank System
		Facilities
		Receives SST Waste to Be Retrieved
		Receives Stored East Area DST Waste
		Receives Stored East Area Liquid Waste for Phase II Processing
		Receives Stored West Area DST Waste
		Receives Supernatant from DSTs for SST Sluicing
Privatization Phase I	RL-TW06	Provides LAW/HLW Plant Phase I, Entrained Solids for Return to
		DSTs
Solid Waste Storage & Disposal	RL-WM03	Receives DST RET, CH LLMW III
		Receives TF OPER, CH-LLMW-I
		Receives TF OPER, CH-LLMW-III
		Receives TF OPER, CH-LLW-I
		Receives TF OPER, RH-LLMW-I
		Receives TF OPER, RH-LLMW-III
		Receives TF VADOSE, CH-LLMW-I
		Receives TWP W314, CH-LLMW-I
		Receives TWP W314, CH-LLMW-III
		Receives TWP W314, CH-LLW-I
		Receives TWP W314, RH-LLMW-I
		Receives TWP W314, RH-LLMW-III
Solid Waste Treatment	RL-WM04	Provides Liquid Waste From 221-T to West Area DSTs
		Provides Waste from 221-T to 204-AR
		Provides Waste From 2706-T to 204-AR
Liquid Effluents	RL-WM05	Provides 242-A HLW from Training Runs
		Provides Concentrated Tank Waste
		Receives Dilute Tank Waste
		Receives Tank Farms Treated Liquid Effluent
Analytical Services	RL-WM06	Provides Liquid Waste From 222-S Lab to West Area DSTs
		Provides Waste from 222-S Lab to 204-AR
		Receives Analytical Laboratory Samples from TWRS
		Receives In-Field Laboratory Samples from TWRS
WESF	RL-TP02	Provides WESF-Misc. HLW
PUREX	RL-TP03	Provides PUREX-TCO (DN), HLW
PFP	RL-TP05	Provides PFP Stabilization, HLW
224/227 Facility Transition	DI TDOC	Provides PFP Transition, HLW
324/327 Facility Transition	RL-TP08	Provides 324 Facility HLW Provides 327 Facility Redicactive/Mixed Liquid Wests to DSTs
100 Area Source Remedial Action	RL-ER01	Provides 327 Facility Radioactive/Mixed Liquid Waste to DSTs Provides 105-F & 105-H Basin TCO, HLW
PNNL Waste Management	RL-ERUT RL-ST01	Provides 105-F & 105-H Basin TCO, HLW Provides 325 Building, HLW
r iviv∟ vvaste ivianagement	KL-SIUI	ILIONIDES 353 DUIIDING, TEVV

4.2.1.3.7 Requirements References

- · DOE/EIS-0222D, Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan"
- DOE/RL-89-10, Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), Revision 5" DOE/RL-96-92, Hanford Strategic Plan"

4.2.1.4 Retrieval

4.2.1.4.1 Project Description Summary

The mission of the Retrieval Project is, "in an environmentally sound, safe, secure, and cost-effective manner, to:

- 1. Retrieve wastes from single-shell tanks, double-shell tanks, and designated miscellaneous underground storage tanks;
- 2. Provide waste to privatization contractors for processing; and
- 3. Close those tanks in accordance with regulatory requirements."

The Retrieval Project will establish the functions and requirements and install the equipment needed to deliver the proper waste feed on schedule to the private immobilization contractor for Phase I Privatization, and transition the waste retrieval and treatment to private contractors for Phase II Privatization.

The Tank Waste Remediation System (TWRS) Environmental Impact Statement Record of Decision calls for retrieval of wastes from all 149 single-shell tanks (SSTs), 28 double-shell tanks (DSTs), and miscellaneous underground storage tanks (MUSTs). Until all waste is retrieved, the DSTs must function to store and prepare waste retrieved from SSTs and MUSTs for waste treatment facilities.

4.2.1.4.2 Life-Cycle Material and Waste Flow

The following tables contain the waste forecasts by facility and waste category that the project is planning to receive or generate over the full life cycle of the project's involvement with the facilities listed. The values listed are forecasts and not requirements allocated to the projects.

Table 4-8 Retrieval Waste/Material Flow (Out)

Major Facility	Category	Period	Value	Units
Tank Farm System	CH LĽMŴ I	2001 - 2028	2210	cubic meters
	CH LLMW III	2001 - 2028	645.0	cubic meters
	CH LLW I	2007 - 2035	17700	cubic meters
	CH TRUM	2020 - 2028	491.0	cubic meters
	HLW	2007 - 2028	578000	cubic meters
	RH LLMW I	2007 - 2028	154.0	cubic meters
	RH LLMW III	2001 - 2028	27400	cubic meters
	RH TRUM	2008 - 2028	674.0	cubic meters

4.2.1.4.3 Facility Life-Cycle Requirements

Requirements

- DOE has decided to implement the Phased Implementation alternative for the tank waste.
- · The tank waste will be retrieved.
- · Single Shell Tank farms shall be closed by Sep 30, 2024

Planning Assumptions

- Facilities other than processing facilities shall be dismantled.
- · Central Plateau tank farms shall be closed
- Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment

4.2.1.4.4 Project Safety Authorization Basis/NEPA and Permits

The Authorization Basis consists of those aspects of the facility design basis and operational requirements relied upon by the DOE to authorize operation. These aspects are considered important to the safety of the facility operations. The complete list of documents that comprise the Authorization Basis for TWRS facilities and activities is provided in Attachment A of HNF-IP-0842, TWRS Administration, Volume IV, Section 5.4, "Unreviewed Safety Questions" (FDH 1998a). The current Authorization Basis does not include all activities planned by the Retrieval Project; therefore, modifications to the current Authorization Basis will be required.

To comply with NEPA requirements, the DOE and Ecology prepared DOE/EIS-0212, Safe Interim Storage of Hanford Tank Waste Final Environmental Impact Statement (SIS EIS) (RL and Ecology 1995). Subsequently, the DOE issued the Record of Decision (ROD): Safe Interim Storage of Hanford Tank Wastes, Hanford Site, Richland, WA (DOE 1995a) on November 21, 1995, following concurrence by the State of Washington.

The TWRS EIS ROD (DOE 1997a) addresses retrieval of the tank waste. Closure plans and NEPA ROD for closure will be developed.

The SSTs are currently operating in accordance with RCRA interim status requirements and will go directly to closure following retrieval. The DSTs are currently operating under RCRA interim status and a RCRA final status permit (Part B) application is scheduled for submittal to Ecology in 2000. New project construction must be within the scope of the existing interim status or final status permits or a new or revised permit must be obtained before construction or operation.

Construction and new (or modified) operations within the tank farms that result in emissions to the air require prior approval from the Washington State Department of Health and the U.S. Environmental Protection Agency (EPA) for radionuclides. Ecology approval is required for toxic air pollutants. A Notice of Construction is prepared for each major project and/or activity and submitted to the respective agency for review and approval. Construction cannot commence until all submitted Notices of Construction are approved.

Public and worker health and safety requirements are defined in the TWRS mission analysis, SRIDs, and the Safety Authorization Basis.

4.2.1.4.5 Tri-Party Agreement Requirements

- TPA.M.45.3.T.1 Complete SST waste retrieval demonstration. [Due Date: 9/30/2003]
- TPA.M.45.3.T.2 Initiate final retrieval demonstration of C-106. [Due Date: 6/30/2002]
- TPA.M.45.4.T.1 Provide initial single-shell tank retrieval systems. [Due Date: 11/30/2003]
- TPA.M.45.4.T.3 Complete construction for the initial SST retrieval systems. [Due Date: 6/30/2003]
- TPA.M.45.5 Retrieve waste from all remaining single-shell tanks. [Due Date: 9/30/2018]
- TPA.M.45.5.T.1 Initiate tank waste retrieval from one single-shell tank. [Due Date: 12/31/2003]
- TPA.M.45.5.T.2 Initiate tank waste retrieval from two additional single-shell tanks. [Due Date: 9/30/2004]
- TPA.M.45.5.T.3 Initiate tank waste retrieval from three additional single-shell tanks. [Due Date: 9/30/2005]
- TPA.M.45.5.T.4 Initiate tank waste retrieval from four additional single-shell tanks. [Due Date: 9/30/2006]
- TPA.M.45.5.T.5 Initiate tank waste retrieval from five additional single-shell tanks. [Due Date: 9/30/2007]
- TPA.M.45.5.T.6 Initiate tank waste retrieval from five additional single-shell tanks. [Due Date: 9/30/2008]
- TPA.M.45.5.T.7 Initiate tank waste retrieval from seven additional single-shell tanks. [Due Date: 9/30/2009]
- TPA.M.45.5.T.8 Initiate tank waste retrieval from eight additional single-shell tanks. [Due Date: 9/30/2010]
- TPA.M.45.5.T.9 Initiate tank waste retrieval from ten additional single-shell tanks. [Due Date: 9/30/2011]
- TPA.M.45.5.T.10 Initiate tank waste retrieval from 12 additional single-shell tanks. [Due Date: 9/30/2012]
- TPA.M.45.5.T.11 Initiate tank waste retrieval from 14 additional single-shell tanks. [Due Date: 9/30/2013]
- TPA.M.45.5.T.12 Initiate tank waste retrieval from 17 additional single-shell tanks. [Due Date: 9/30/2014]
- TPA.M.45.5.T.13 Initiate tank waste retrieval from 20 additional single-shell tanks. [Due Date: 9/30/2015]
- TPA.M.45.5.T.14 Initiate tank waste retrieval from 20 additional single-shell tanks. [Due Date: 9/30/2016]
- TPA.M.45.5.T.15 Initiate tank waste retrieval from 20 additional single-shell tanks. [Due Date: 9/30/2017]

- TPA.M.45.6 M-45-06 9/30/2024 Complete closure of all single-shell tank farms. The single-shell tank closure work plan will be prepared describing the work integration process for single-shell tank closures and status of work and integration process. Known issues will be identified and an explanation will be given on how these issues are being addressed. This work plan will be provided to Ecology for review/comment and will be used as a roadmap for closure of the single-shell tanks. Because of the uncertainties in the closure process, the work plan will evolve as these uncertainties are resolved and eventually it will become the SST closure/post-closure plan(s) issued for Ecology's approval under subsequent TPA interim milestones. Major work areas covered in the work plan will include waste retrieval, operable units characterization, technologies development to support closure, regulatory pathway and strategy for achieving closure.
- TPA.M.45.6.T.3 Initiate closure actions on an operable unit or tank farm basis.
 Closure shall follow completion of the retrieval actions under proposed milestone
 M-45-05. Closure will be defined in an approved closure plan for the demonstration farm. Final closure is defined as regulatory approval of completion of closure actions.
 [Due Date: 3/31/2012]
- TPA.M.45.6.T.4 Complete closure actions on one operable unit or tank farm. [Due Date: 3/31/2014]
- TPA.M.45.8 Establish full scale capability for mitigation of waste tank leakage during retrieval sluicing operations. [Due Date: 6/30/2003]
- TPA.M.45.8.B Complete demonstration and installation of leak monitoring and mitigation systems for initial SST retrieval. [Due Date: 6/30/2003]
- TPA.M.45.52 Submit to Ecology for review and approval as an Agreement primary document a site-specific SST WMA Phase 1 RFI/CMS Work Plan addenda for WMA S-SX. [Due Date 10/31/99]
- TPA.M. 45.53 Submit to Ecology for review and approval as an Agreement primary document a site-specific SST WMA Phase 1 RFI/CMS Work Plan addenda for WMA B-BX-BY. [Due Date 5/31/00]
- TPA.M.45.54 Submit to Ecology for review and approval as an Agreement primary document a site-specific SST WMA Phase 1 RFI/CMS Work Plan addenda for WMA T and WMA TX-TY. [Due Date 12/31/00]
- TPA.M.45.55 Submit to Ecology for review and approval as an Agreement primary document a Phase 1 RFI Report integrating results of data gathering activities and evaluations for WMAs S-SX, T, TX-TY, and B-BX-BY and related activities including groundwater monitoring and impacts assessment using Hanford Site groundwater models, with conclusions and recommendations. [Due Date 2/29/04]
- TPA.M.45.55.T.1 Submit to Ecology for review and approval as an Agreement secondary document a Field Investigation Report prusuant to the site-specific SST WMA Phase 1 RFI/CMS Work Plan addenda for WMA S-SX. [Due Date 4/30/01]
- TPA.M.45.55.T.2 Submit to Ecology for review and approval as an Agreement secondary document a Field Investigation Report prusuant to the site-specific SST WMA Phase 1 RFI/CMS Work Plan addenda for WMA B-BX-BY. [Due Date 4/30/01]
- TPA.M.45.55.T.3 Submit to Ecology for review and approval as an Agreement secondary document a Field Investigation Report prusuant to the site-specific SST WMA Phase 1 RFI/CMS Work Plan addenda for WMA T and WMA TX-TY. [Due Date 6/30/03]
- TPA.M.45.56 Complete implementation of agreed-to interim measures. [Due TBD]
- TPA.M.45.56.T.1 Summarize results of engineering studies and recommendations on isolating water lines in or near SST WMAs, sealing abandoned wells in or near SST WMAs, and controlling surface drainage at SST WMAs and submit these results to Ecology. [Due Date 10/31/99]

- TPA.M.45.58 Submit to Ecology for review and approval as an Agreement primary document a Corrective Measures Study for interim correctve measures. [Due TBD]
- TPA.M.45.59 Control surface water infiltration pathways as needed to control or significantly reduce the likelihood of migration of subsurface contamination to groundwater at the SST WMAs. [Due TBD]
- TPA.M.45.60 Submit to Ecology for review and approval as an Agreement primary document DOE's RFI/CMS Work Plan for SST WMAs. [Due Date 6 months following RFI Report Approval]

4.2.1.4.6 Interfaces

TABLE 4-9 Retrieval Interfaces

Project Title	Project Number	Interface
Tank Farm Operations	RL-TW03	Provides Safe & Compliant Deactivated Double Shell Tank System Facilities
		Provides Safe & Compliant Deactivated Single Shell Tank System
		Facilities
		Provides SST Waste to Be Retrieved
		Provides Stored East Area DST Waste
		Provides Stored East Area Liquid Waste for Phase II Processing
		Provides Stored West Area DST Waste
		Provides Supernatant from DSTs for SST Sluicing
		Receives DST Waste
		Receives Empty DSTs
		Receives Empty SSTs
		Receives Excess DST System Facilities
		Receives Excess SST System Facilities
		Receives Retrieved SST Waste, Phase I
Driverties Disease I	DI TWO	Receives Retrieved SST Waste, Phase II
Privatization Phase I	RL-TW06	Receives LAW/HLW Plant, Phase I HLW Feed
Privatization Phase II	RL-TW07	Receives LAW/HLW Plant, Phase I LAW Feed Receives LAW Treatment Facility, Phase II Feed
Solid Waste Storage & Disposal	RL-IW07 RL-WM03	Receives DST RET, CH-LLMW-I
Solid Waste Storage & Disposar	IXE-VIVIOS	Receives DST RET, RH-LLMW-III
		Receives SST LLE, CH-TRUM
		Receives SST LLE, RH-LLMW-III
		Receives SST LLE, RH-TRUM
		Receives SST RET, CH-LLMW-I
		Receives SST RET, CH-LLMW-III
		Receives SST RET, CH-LLW-I
		Receives SST RET, RH-LLMW-I
		Receives SST RET, RH-LLMW-III
		Receives TWP W211, CH-LLMW-I
		Receives TWP W211, CH-LLMW-III
		Receives TWP W211, RH-LLMW-III
		Receives TWP W211, RH-TRUM

4.2.1.4.7 Requirements References

- DOE/EIS-0189-ROD, Record of Decision for the Tank Waste Remediation System, Hanford Site, Richland, Washington.
- DOE/EIS-0222D, Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan"

- DOE/RL-89-10, Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), Revision 5"
- DOE/RL-96-92, Hanford Strategic Plan"

4.2.1.5 Process Waste Support

4.2.1.5.1 Project Description Summary

The mission of Process Waste Support is to assist the ORP in the management of Privatization Phase 1 and Privatization Phase 2. This includes the integration of privatized and non-privatized activities; assisting in the execution of the privatization contracts; managing interfaces with the PHMC and Private Contractors; assisting in managing the interfaces with stakeholders and regulators: and assisting in the management of the key risks and key decisions associated with tank waste disposal.

4.2.1.5.2 Life-Cycle Material and Waste Flow

This project has no responsibility for managing waste inventory.

4.2.1.5.3 Facility Life-Cycle Requirements

- Requirements
 - None
- Planning Assumptions
 - None

4.2.1.5.4 Project Safety Authorization Basis/NEPA and Permits

The Process Waste Support Project is an administration and integration project that does not have facility or operation responsibilities. The Process Waste Support Project does not require a safety Authorization Basis.

This project shall support implementation of the TWRS EIS ROD (DOE 1997a).

It is assumed the DOE will retain overall responsibility for ensuring protection of the public and the environment for privatized and non-privatized activities. A special Regulatory Unit reporting directly to the RL Operations manager has been established to provide independent radiological and nuclear safety oversight of the private contractors. This responsibility may be assumed by the Nuclear Regulatory Commission in the future.

4.2.1.5.5 Tri-Party Agreement Requirements

None

4.2.1.5.6 Interfaces

4.2.1.5.7 Requirements References

None

4.2.1.6 Privatization Phase I

4.2.1.6.1 Project Description Summary

Phase I objectives are to: demonstrate the technical and business viability of using privatized facilities to treat Hanford tank waste; define and maintain required levels of radiological, nuclear, process, and occupational safety; maintain environmental protection and compliance; and substantially reduce life-cycle costs and time required to treat Hanford tank waste. This project demonstrates progress in limiting potential contamination of the Columbia River by removing high-level waste from underground storage tanks which can leak into the groundwater.

4.2.1.6.2 Life-Cycle Material and Waste Flow

The following tables contain the waste forecasts by facility and waste category that the project is planning to receive or generate over the full life cycle of the project's involvement with the facilities listed. The values listed are forecasts and not requirements allocated to the projects.

Table 4-10 Privatization Phase I Waste/Material Flow (In)

Major Facility	Category	Period	Value	Units
LAW/HLW Plant, Phase 1	HLW	2007 - 2018	46200	cubic meters

Table 4-11 Privatization Phase I Waste/Material Flow (Out)

Major Facility	Category	Period	Value	Units
LAW/HLW Plant, Phase 1	CH LLMW I	2006 - 2019	1230	cubic meters
	CH LLMW III	2018 - 2019	142.0	cubic meters
	CH LLW I	2012 - 2014	289000	cubic meters
	HLW	2007 - 2018	725.0	cubic meters
	RH LLMW I	2010 - 2019	1740	cubic meters
	RH LLMW III	2008 - 2018	23700	cubic meters
	Treated Liquid Effluent	2003 - 2019	2430000	cubic meters
	Waste Water	2003 - 2019	759000	cubic meters

4.2.1.6.3 Facility Life-Cycle Requirements

Requirements

- DOE has decided to implement the Phased Implementation alternative for the tank waste.
- The waste will be separated into low-activity waste and high-level waste through physical and chemical processes and then treated in demonstration-scale facilities.
- Vitrified high-level waste will be prepared for interim storage at the Canister Storage Building.
- · Immobilized low-activity waste will be prepared for future onsite disposal.
- High level waste immobilization facility shall start operations by Dec 2009.
- · Tank waste commercial demonstration facility (ies) shall be constructed.
- The TWRS Privatized Facility for Phase I shall comply with the requirements contained in the TWRS Privatization Contract, No. DE-RP06-96RL13308.

Planning Assumptions

- Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.
- · Processing facilities shall be entombed in place with co-disposal of waste materials
- · Facilities other than processing facilities shall be dismantled.
- Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment
- · Facilities shall be maintained within the approved safety envelope
- Tank waste processing shall be operated within the approved safety envelope as approved by the REG Unit.
- Tank waste shall be separated into High Level and Low Activity fractions.

4.2.1.6.4 Project Safety Authorization Basis/NEPA and Permits

The private contractor shall develop and implement an integrated, standards-based, safety management program to ensure that radiological, nuclear, and process safety requirements are defined, implemented, and maintained. Radiological, nuclear, and process safety requirements shall be adapted to the specific hazards that are identified with the contractor's waste treatment services.

The contractor's integrated standards-based safety management program shall be developed to comply with the specific nuclear safety regulations defined under the 10 CFR 800 series of nuclear safety requirements and with the regulatory program established in the following:

- DOE/RL-96-03, DOE Regulatory Process for Radiological, Nuclear, and Process Safety for TWRS Privatization Contractors (Vieth 1996a)
- DOE/RL-96-04, Process for Establishing a Set of Radiological, Nuclear, and Process Safety Standards and Requirements for TWRS Privatization (Vieth 1996b)
- DOE/RL-96-05, Concept of the DOE Regulatory Process for Radiological, Nuclear, and

Process Safety for TWRS Privatization Contractors (Vieth 1996c)

• DOE/RL-96-06, Top-Level Radiological, Nuclear, and Process Safety Standards and Principles for TWRS Privatization Contractors (Vieth 1996d).

The contractor shall prepare and submit to the DOE Regulatory Unit for review and approval several radiological, nuclear, and process safety deliverables in accordance with the privatization contract.

4.2.1.6.5 Tri-Party Agreement Requirements

- TPA.M.20.58 Submit LAW Facility Part B Dangerous Waste Permit Application to Ecology. [Due Date: 12/31/2003]
- TPA.M.50.4 Start hot operations of HLW Pretreatment Facility. [Due Date: 6/30/2008]
- TPA.M.51.3 Initiate hot operations of the HLW Vitrification Facility. [Due Date: 12/31/2009]
- TPA.M.51.3.T.3 Initiate construction of the HLW vitrification facility. [Due Date: 6/30/2002]
- TPA.M.51.3.T.4 Complete construction of the HLW vitrification facility. [Due Date: 12/31/2007]

4.2.1.6.6 Interfaces

TABLE 4-12 Privatization Phase I Interfaces

	Project		
	Number		
Project Title	Number	Interface	
Hazardous Waste Disposal Contracts	EXTERNAL	Receives BNFL VIT, HAZ	
Tank Farm Operations	RL-TW03	Receives LAW/HLW Plant Phase I, Entrained Solids for Return to DSTs	
Retrieval	RL-TW04	Provides LAW/HLW Plant, Phase I HLW Feed	
		Provides LAW/HLW Plant, Phase I LAW Feed	
Immobilized Tank Waste Storage &	RL-TW09	Provides Phase I IHLW Transportation Mechanism	
Disposal		Receives LAW/HLW PH-1 Immobilized LAW	
·		Receives LAW/HLW Ph-I Non-Routine High-Level Solid Waste	
		Receives Phase I IHLW Production Information	
		Receives Phase I LAW/HLW Plant IHLW	
Solid Waste Storage & Disposal	RL-WM03	Receives BNFL VIT, CH-LLMW-I	
		Receives BNFL VIT, CH-LLMW-III	
		Receives BNFL VIT, CH-LLW-I	
		Receives BNFL VIT, CH-LLW-III	
		Receives BNFL VIT, RH-LLMW-I	
		Receives BNFL VIT, RH-LLW-III	
Liquid Effluents	RL-WM05	Receives LAW/HLW Plant Phase 1 Deactivation	
·		Non-radioactive/Non-dangerous Liquid Effluent	
		Receives LAW/HLW Plant Phase I, Deactivation Waste Water	
		Receives LAW/HLW Plant Phase I, Non-radioactive/Non-dangerous	
		Liquid Effluent	
		Receives LAW/HLW Plant Phase I, Waste Water	

4.2.1.6.7 Requirements References

- DE-RP06-96RL13308, TWRS Privatization Contract, DE-RP06-96RL13308"
- DOE/EIS-0189-ROD, Record of Decision for the Tank Waste Remediation System, Hanford Site, Richland, Washington. "
- DOE/EIS-0222D, Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan"
- DOE/RL-89-10, Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), Revision 5"
- DOE/RL-96-92, Hanford Strategic Plan"

4.2.1.7 Privatization Phase II

4.2.1.7.1 Project Description Summary

Phase II will be the full-scale production phase, in which the facilities will be configured so all the waste can be processed. The objectives of Phase II are to implement the lessons from Phase I; to process all tank waste and the cesium and strontium capsules into forms suitable for final disposal; achieve competition and cost savings; and meet the Tri-Party Agreement milestones.

4.2.1.7.2 Life-Cycle Material and Waste Flow

The following tables contain the waste forecasts by facility and waste category that the project is planning to receive or generate over the full life cycle of the project's involvement with the facilities listed. The values listed are forecasts and not requirements allocated to the projects.

Table 4-13 Privatization Phase II Waste/Material Flow (In)

Major Facility	Category	Period	Value	Units
LAW Treatment Facility, Phase 2	HLW	2012 - 2028	531000	cubic meters
HLW Treatment Facility, Phase 2	HLW	2012 - 2028	168000	cubic meters

Table 4-14 Privatization Phase II Waste/Material Flow (Out)

Major Facility	Category	Period	Value	Units
LAW Treatment Facility, Phase 2	CH LLMW I	2006 - 2019	1230	cubic meters
	CH LLMW III	2018 - 2019	142.0	cubic meters
	HLW	2012 - 2028	168000	cubic meters
	RH LLMW I	2010 - 2019	1740	cubic meters
	RH LLMW III	2012 - 2028	227000	cubic meters
	Sanitary Liquid Waste	2000 - 2033	1690	Mgal
	Sanitary Solid Waste	2000 - 2033	78.2	tons
	Treated Liquid Effluent	2012 - 2028	3400000	cubic meters
	Waste Water	2012 - 2029	580000	cubic meters
HLW Treatment Facility, Phase 2	CH LLMW III	2012 - 2020	5.0	cubic meters
	HLW	2012 - 2028	16400	cubic meters
	Treated Liquid Effluent	2012 - 2029	3490000	cubic meters
	Waste Water	2012 - 2029	580000	cubic meters

4.2.1.7.3 Facility Life-Cycle Requirements

Requirements

- DOE has decided to implement the Phased Implementation alternative for the tank waste.
- · The tank waste will be separated into low-activity and high-level waste
- · High level tank waste shall be immobilized.
- · Low activity tank waste shall be immobilized.

Planning Assumptions

- Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.
- · Processing facilities shall be entombed in place with co-disposal of waste materials
- · Facilities other than processing facilities shall be dismantled.
- Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment
- Facilities shall be maintained within the approved safety envelope
- The contents of the cesium capsules shall be blended with HLW feed, treated and dispositioned as immobilized HLW.
- The contents of the strontium capsules shall be blended with HLW feed, treated and dispositioned as immobilized HLW.
- Tank waste shall be separated into High Level and Low Activity fractions.

4.2.1.7.4 Project Safety Authorization Basis/NEPA and Permits

The requirements for the safety authorization basis for Phase II have not been developed. It is assumed that each private contractor will develop and implement an integrated, standards-based, safety management program to ensure that radiological, nuclear, and process safety requirements are defined, implemented, and maintained in accordance with U.S. Nuclear Regulatory Commission policies and procedures.

4.2.1.7.5 Tri-Party Agreement Requirements

- TPA.M.50.0 Complete pretreatment processing of Hanford tank waste. [Due Date: 12/31/2028]
- TPA.M.61.0 Complete pretreatment and immobilization of Hanford Low Activity Waste (LAW). [Due Date: 12/31/2028]

4.2.1.7.6 Interfaces

TABLE 4-15 Privatization Phase II Interfaces

Project Title	Project Number	Interface
Offsite Landfill	EXTERNAL	Receives Phase 2 Treatment Sanitary Solid Waste
Hazardous Waste Disposal Contracts	EXTERNAL	Receives BNFL VIT, HAZ
·		Receives HLVP, HAZ
Retrieval	RL-TW04	Provides LAW Treatment Facility, Phase II Feed

TABLE 4-15 Privatization Phase II Interfaces (Continued)

	Project	
Project Title	Number	Interface
Immobilized Tank Waste Storage &	RL-TW09	Receives Phase II HLW Plant IHLW
Disposal		Receives Phase II LAW Plant ILAW
Solid Waste Storage & Disposal	RL-WM03	Receives BNFL VIT, CH-LLMW-I
		Receives BNFL VIT, CH-LLMW-III
		Receives BNFL VIT, CH-LLW-I
		Receives BNFL VIT, CH-LLW-III
		Receives BNFL VIT, RH-LLMW-I
		Receives BNFL VIT, RH-LLW-III
		Receives HLVP, CH-LLMW-I
		Receives HLVP, CH-LLMW-III
		Receives HLVP, CH-LLW-I
		Receives HLVP, CH-LLW-III
		Receives HLVP, CH-TRUM
		Receives HLVP, RH-LLW-III
		Receives HLVP, RH-TRUM
Liquid Effluents	RL-WM05	Receives HLW Phase 2 Deactivation Waste Water
		Receives LAW Phase 2 Deactivation Waste Water
		Receives LAW Phase 2 Non-radioactive/Non-dangerous Liquid
		Effluent
		Receives LAW Phase 2 Waste Water
		Receives TWRS Ph2 HLW Deactivation WW,
		Non-radioactive/Non-dangerous Liquid Effluent
		Receives TWRS Ph2 HLW WW, Non-radioactive/Non-dangerous
		Liquid Effluent
		Receives TWRS Priv Ph 2 HLW, Waste Water
WESF	RL-TP02	Provides WESF Cesium Capsules
		Provides WESF Strontium Capsules

4.2.1.7.7 Requirements References

- DOE/EIS-0189-ROD, Record of Decision for the Tank Waste Remediation System, Hanford Site, Richland, Washington.
- DOE/EIS-0222D, Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan"
- DOE/RL-89-10, Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), Revision 5"
- DOE/RL-96-92, Hanford Strategic Plan"

4.2.1.8 Privatization Infrastructure

4.2.1.8.1 Project Description Summary

Part of the RPP mission is to separate the Hanford Site's tank waste into low-activity waste (LAW) and high-level waste (HLW) fractions and to immobilize and dispose of them in an environmentally sound, safe, and cost-effective manner. To achieve this, a two-phased strategy that uses the private sector has been implemented to treat and immobilize the LAW and HLW fractions. Phase I will treat, immobilize, and store or dispose approximately 10 percent (by volume) of the tank waste. Phase II will pretreat, immobilize, and dispose of the remainder of the tank waste, using full-scale production facilities.

The contract that DOE-RL and the privatization contractor signed in August 1998 establishes the general scope and timing requirements for the Privatization Infrastructure Program. These requirements are defined in more detail in the TWRS Privatization Project Interface Control Document (BNFL 1998), and will be further modified as a result of the DOE-RL's decision on whether to proceed with privatization in August 2000.

4.2.1.8.2 Life-Cycle Material and Waste Flow

This project has no responsibility for managing waste inventory.

4.2.1.8.3 Facility Life-Cycle Requirements

- Requirements
 - None
- Planning Assumptions
 - None

4.2.1.8.4 Project Safety Authorization Basis/NEPA and Permits

The Authorization Basis consists of those aspects of the facility design basis and operational requirements relied upon by the DOE to authorize operation. These aspects are considered important to the safety of the facility operations. The complete list of documents that comprise the Authorization Basis for RPP facilities and activities is provided in Attachment A of HNF-IP-0842, TWRS Administration, Volume IV, Section 5.4, "Unreviewed Safety Questions" (FDH 1998a). In addition, the Waste Management Authorization Basis applies to some elements of this project. The Privatization Infrastructure Project facilities and activities will be evaluated to verify that they are within the current Authorization Basis. If any facilities or activities are determined to be outside the current Authorization Basis, modifications to the Authorization Basis will be required.

4.2.1.8.5 Tri-Party Agreement Requirements

None

4.2.1.8.6 Interfaces

The Privatization Infrastructure Project will provide selected utilities and services that connect the Privatization Phase I and Privatization Phase II facilities with interfacing facilities noted in Sections 4.2.1.6.8 and 4.2.1.7.8. Utilities included are raw and potable water, electricity, and road access. Services included are radioactive solid waste and liquid effluent disposal.

4.2.1.8.7 Requirements References

None

4.2.1.9 Immobilized Tank Waste Storage & Disposal

4.2.1.9.1 Project Description Summary

The Immobilized Tank Waste Storage & Disposal project will provide safe storage and final near-surface disposal on the Hanford Site for immobilized low activity tank waste (ILAW), and interim storage for immobilized high level waste (IHLW).

The ILAW project will be complete when the immobilized low activity tank waste is disposed of on the Hanford site, long term surveillance and monitoring of the ILAW disposal site is ongoing, and interim storage facilities have been decontaminated and decommissioned, and closure barriers have been placed over disposal sites. The ILAW Storage and Disposal facilities will accept the immobilized low activity tank waste from TWRS privatization vendor. The ILAW waste packages will be placed in near surface disposal facilities. The near surface disposal systems along with the waste package are to meet DOE regulatory requirements for near-surface disposal of low-level waste.

The IHLW Interim Storage Facility will receive IHLW, and transport these products to a Canister Storage Building (CSB), where the product will be stored until shipped to a geologic repository. Storage of the Phase I product in the CSB will consolidate the high level waste in one area and provide a safe environmentally sound storage of the IHLW product. HLW Interim Storage will provide additional storage capacity during Phase 1B and II privatization. In addition HLW Interim Storage will provide loadout capability for shipment of IHLW canisters to a geologic repository.

IHLW and ILAW waste receipts are currently planned to commence in 2007 and 2008, respectively.

4.2.1.9.2 Life-Cycle Material and Waste Flow

The following tables contain the waste forecasts by facility and waste category that the project is planning to receive or generate over the full life cycle of the project's involvement with the facilities listed. The values listed are forecasts and not requirements allocated to the projects.

Table 4-16 Immobilized Tank Waste Storage & Disposal Waste/Material Flow (In)

Major Facility	Category	Period	Value	Units
Canister Storage Building	HLW	2007 - 2018	725.0	cubic meters
IHLW Storage Modules, Part 2	HLW	2012 - 2028	16400	cubic meters
Immobilized LAW Disposal Facility	RH I I MW III	2008 - 2028	251000	cubic meters

Table 4-17 Immobilized Tank Waste Storage & Disposal Waste/Material Flow (Out)

Major Facility	Category	Period	Value	Units
Canister Storage Building	HLW	2036 - 2036	725.0	cubic meters
IHLW Storage Modules, Part 2	HLW	2036 - 2044	16400	cubic meters
	Sanitary Liquid Waste	2000 - 2042	16.7	Mgal
	Sanitary Solid Waste	2041 - 2044	402000	cubic meters
	Sanitary Solid Waste	2000 - 2043	407.0	tons

4.2.1.9.3 Facility Life-Cycle Requirements

Requirements

- DOE has decided to implement the Phased Implementation alternative for the tank waste.
- Vitrified high-level waste will be placed in interim storage at the Canister Storage Building pending future disposal at a national geologic repository.
- The immobilized low activity waste will be disposed of onsite in near-surface disposal facilities.
- · The high level waste produced during Phase II will be temporarily stored on-site.
- Immobilized low activity tank waste shall be disposed in the Central Plateau.
- · Immobilized high level waste interim storage facility shall be provided.
- Acceptance of HLW into the Civilian Radioactive Waste Management System (CRWMS) shall be in accordance with DOE/RW-0351P, rev.1, Waste Acceptance System Requirements.

Planning Assumptions

- Remediation levels and disposal standards that are consistent with long term uses for the central plateau shall be established by either the Resource Conservation and Recovery Act of 1976 (RCRA), CERCLA, or NEPA.
- Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.
- · Facilities other than processing facilities shall be dismantled.
- Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment
- Central Plateau shall be used for the disposal of radioactive waste materials that remain onsite.
- Immobilized high level waste shall be shipped to the national high level waste repository.
- Central Plateau facilities shall be maintained within the approved safety envelope
- Facilities shall be maintained within the approved safety envelope

4.2.1.9.4 Project Safety Authorization Basis/NEPA and Permits

The Authorization Basis consists of those aspects of the facility design basis and operational requirements relied upon by the DOE to authorize operation. These aspects are considered

important to the safety of the facility operations. The complete list of documents that comprise the Authorization Basis for RPP facilities and activities is provided in Attachment A of HNF-IP-0842, TWRS Administration, Volume IV, Section 5.4, "Unreviewed Safety Questions" (FDH 1998a). The current Authorization Basis does not include all activities of the Immobilized Tank Waste Storage & Disposal Project. Therefore, modifications to the current Authorization Basis will be required.

The project has defined and planned the necessary permits that need to be prepared, reviewed, and issued before startup of the facilities. The recently issued TWRS EIS (DOE 1996a) and ROD (DOE 1997a) provide NEPA coverage for ILAW and IHLW storage and disposal.

A performance assessment is being prepared to examine the long-term environmental and human health effects associated with the planned disposal of the ILAW. The assessment is required by Tri-Party Agreement Milestone M-90-05-T01, "Submit Final ILAW Disposal Facility Performance Agreement to Ecology for Review." The U.S. Nuclear Regulatory Commission has indicated that the ILAW would be considered "incidental waste" if the DOE follows its program plan for separating and immobilizing the waste to the maximum extent technically and economically practical. In addition, the ILAW must meet Class C standards of 10 CFR 61. If the performance assessments continue to show that public health and safety would be protected to standards comparable to those established by the U.S. Nuclear Regulatory Commission for the disposal of LLW, the U.S. Nuclear Regulatory Commission will consider it incidental waste. Currently, the DOE and its contractors are obligated to meet the requirements of DOE Order 5820.2A. It is anticipated that DOE Order 435.1 will become the primary regulation governing management and disposal of radioactive wastes at DOE facilities.

The contractor is responsible for obtaining the required permits to support facility operation.

4.2.1.9.5 Tri-Party Agreement Requirements

- TPA.M.20.56 Submit Canister Storage Facility Part B Dangerous Waste Permit Application to Ecology. [Due Date: 12/31/2000]
- TPA.M.20.57 Submit Interim ILAW Facility Part B Dangerous Waste Permit Application to Ecology. [Due Date: 12/31/2000]
- TPA.M.90.0 Complete acquistion of new facilities, modification of existing facilities, and/or modification of planned facilities as necessary for storage of Hanford Site IHLW and ILAW, and disposal of ILAW. [Due Date: TBD. Six months after approval of Project Management Plan]
- TPA.M.90.3 Initiate ILAW Interim Storage Facility construction. [Due Date: 6/30/2001]
- TPA.M.90.6 Initiate Hot Operations of ILAW Interim Storage Facility. [Due Date: 12/31/2002]
- TPA.M.90.8 Complete ILAW Disposal Facility Construction [Due Date: 6/30/2003]
- TPA.M.90.10 Initiate Hot Operations of ILAW Disposal Facility [Due Date: 12/31/2005]

4.2.1.9.6 Interfaces

TABLE 4-18 Immobilized Tank Waste Storage & Disposal Interfaces

	Project	
Project Title	Number	Interface
National Geologic Repository	EXTERNAL	Receives Phase I IHLW from CSB
		Receives Phase II IHLW from IHLW Phase II Storage
Offsite Landfill	EXTERNAL	Receives HLW Storage, Sanitary Solid Waste
		Receives IHLW Storage Sanitary Solid Waste
Privatization Phase I	RL-TW06	Provides LAW/HLW PH-1 Immobilized LAW
		Provides LAW/HLW Ph-I Non-Routine High-Level Solid Waste
		Provides Phase I IHLW Production Information
		Provides Phase I LAW/HLW Plant IHLW
		Receives Phase I IHLW Transportation Mechanism
Privatization Phase II	RL-TW07	Provides Phase II HLW Plant IHLW
		Provides Phase II LAW Plant ILAW
Canister Storage Building Operations	RL-WM02	Receives Excess Canister Storage Building
ER Disposal Facility (ERDF)	RL-ER04	Receives Rubble from the IHLW Storage Modules, Phase II Facility
		Demolition

4.2.1.9.7 Requirements References

- DOE/EIS-0189-ROD, Record of Decision for the Tank Waste Remediation System, Hanford Site, Richland, Washington.
- DOE/EIS-0222D, Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan"
- DOE/RL-89-10, Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), Revision 5"
- DOE/RL-96-92, Hanford Strategic Plan"
- DOE/RW-0351P, Waste Acceptance System Requirements Document"

4.2.1.10 RPP Management Support

4.2.1.10.1 Project Description Summary

The RPP Management Support Project (MSP) provides program management services and oversight that sustain RPP integration and control. Practical products of MSP work are systems developed, improved, deployed, and maintained to structure program strategy, direction and business management in support of the RPP technical functions, waste storage and waste disposal. Primary MSP functions include: 1) executive management and strategic planning; 2) systems engineering to support risk and decision management and ongoing evolution of the RPP technical bases; 3) administration of a core program and crosscutting services to ensure environmental, safety, health and quality assurance compliance to all regulatory and contractual requirements applicable for RPP; 4) and life-cycle project management that includes work to establish and maintain technical, cost and schedule elements for the RPP baseline.

4.2.1.10.2 Life-Cycle Material and Waste Flow

This project has no responsibility for managing waste inventory.

4.2.1.10.3 Facility Life-Cycle Requirements

- Requirements
 - None
- Planning Assumptions
 - · None

4.2.1.10.4 Project Safety Authorization Basis/NEPA and Permits

The RPP Management Support Project is a management and integration project that does not have facility or operation responsibilities. The RPP Management Support Project does not require a Safety Authorization Basis.

4.2.1.10.5 Tri-Party Agreement Requirements

None

4.2.1.10.6 Interfaces

4.2.1.10.7 Requirements References

None